FOR THE CASE OF
TN Department of Labor & Workforce Development

TRANSCRIPT OF
Board of Boiler Rules
December 3, 2014
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BOARD OF BOILER RULES

December 3, 2014

9:00 a.m.

Department of Labor and Workforce Development

220 French Landing Drive

Nashville, TN 37243

TOSHA HEARING ROOM
APPEARANCES:

CHAIRMAN BRIAN MORELOCK, Board Member  
Eastman Chemical

EUGENE ROBINSON, Board Member  
Travelers

DOMENIC CANONICO, Board Member  
Canonico & Associates

DAVE BAUGHMAN, Board Member  
Allied Boiler & Supply

SAM CHAPMAN  
Assistant Chief Boiler Inspector, State of Tennessee

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Administrator, Tennessee Department of Labor and Workforce Development

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Assistant Administrator, Tennessee Department of Labor and Workforce Development

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Assistant Board Secretary, Tennessee Department of Labor and Workforce Development

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Legal Counsel, Tennessee Department of Labor and Workforce Development

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Representing University of Tennessee, Barham/Cain/Mynatt

ROY WOOD  
BAE Systems

CHARLIE PHILLIPS  
BAE Systems

ALLEN TRIPP  
Combustion and Control Solutions
APPEARANCES (Continued):

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Combustion and Control Solutions.

RICHARD ENG
Wacker Polysilicon

THOMAS KASTENBERGER
Wacker Polysilicon

NEIL JACKSON
Consultant, State of Tennessee

SAMMY SITZ
Boiler Inspector, State of Tennessee

TIM HOLT
Boiler Inspector, State of Tennessee

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RYAN HERTTER
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MARK BONDI
Mitsubishi Electric

STEPHEN HEATER
UT Battelle and Oak Ridge National Life

DENIS ROTH
Jack Daniels

MELANIE SANDERS
Jack Daniels

DAVID HORTON
Jack Daniels
APPEARANCES (Continued):

MIKE TIPPS
Jack Daniels

RANDALL HARRIS
Chief inspector, US Nitrogen

NATHAN DANIEL
Maintenance engineer, US Nitrogen
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CHAIRMAN MORELOCK: Good morning, everybody. It's 9:00, and I would like to call this quarterly meeting of the Tennessee Board of Boiler Rules to order.

We have some agendas on the back table, if you don't have one. Certainly make yourself available to that.

Please -- as a courtesy, please silence your cell phones while we meet.

So as we get started, let's start with the introductions, please. And we'll start with our court reporter, Debbie. So if you'll start, we'll go around.

THE REPORTER: I'm Debbie Watson, Court Reporter.

MR. CHAPMAN: I'm Sam Chapman, Assistant Chief Boiler Inspector.

MR. ROBINSON: I'm Eugene Robinson, Board Member, Boiler Board Member.

CHAIRMAN MORELOCK: Brian Morelock, Board Member.

DR. CANONICO: Domenic Canonico, Board Member.

MR. BAUGHMAN: Dave Baughman, Board
MS. EWELL: Sydnã© Ewell, Legal Counsel.

CHAIRMAN MORELOCK: We'll start with our . . .

MR. CAIN: Bill Cain, Barham/Cain/Mynatt, representing University of Tennessee.

MR. WOOD: Roy Wood. I'm with BAE Systems.


MR. TRIPP: Allen Tripp with Combustion and Control Solutions.

MR. FLOWERS: David Flowers, Combustion and Control Solutions.

MR. ENG: Richard Eng, Wacker Polysilicon.

MR. KASTENBERGER: Thomas Kastenberger with Wacker Polysilicon.

MR. JACKSON: Neil Jackson, consultant to the State of Tennessee.

MR. SITZ: Sammy Sitz, State of Tennessee Boiler Inspectors.

MR. HOLT: Tim Holt, State Boiler
Inspector.

MS. RHONE: Deborah Rhone, Boiler Office Supervisor.

MR. BAILEY: Dan Bailey. I'm an attorney with the Tennessee Department of Labor.

MR. NEVILLE: James Neville, Neville Engineering.

MR. HERTTER: Ryan Hertter, Hertter Mechanical Services.

MR. BONDI: Mark Bondi with Mitsubishi Electric.

MR. HEATER: Stephen Heater with UT Battelle and Oak Ridge National Life.

MR. ROTH: Denis Roth, Jack Daniels.

MS. SANDERS: Melanie Sanders, Jack Daniels.

MR. HORTON: David Horton, Jack Daniels.

MR. TIPPS: Mike Tipps, Jack Daniels.

CHAIRMAN MORELOCK: All right.

Well, welcome again, everybody. And we do have an attendance sheet that we'll be circulating, so please make sure that you sign that when it comes
Our next item is announcements, and we just have a few. The first one will be related to kind of -- to a safety item. In the event that we would have an emergency or a natural disaster during the -- during our meeting time today, just be aware that there are alarms in the building and security personnel that will direct you, the attendees, and us either to a safe location in the building or, if need be, we would be asked to exit the building on the Rosa Parks side of the building. So just be aware of that.

And we're -- we miss Carlene this morning. From what I understand, she's out sick, so just remember her today. And I also wanted to let you know that -- some of you may remember Bob Elliott. He's a former Tennessee board member and past chair of this board. Next week on December the 10th, he'll be having some cancer surgery at UVA Medical Center, so just please remember him.

And I wanted to -- Sydnã©, does anybody from the State want to make a short report on the results of the Sunset hearing, or do you want me to report that?

MS. EWELL: You may report it.
That would be fine.

CHAIRMAN MORELOCK: Okay. This board is -- goes through a review process every four years, and on November the 19th, Mr. Dave Baughman and Mr. Eugene Robinson represented the Tennessee board and made their presentation, and so we have been reapproved for another four-year cycle, so we're very thankful for that. And we want to thank these gentlemen for their time and preparation to attend that meeting.

And you did a good job, so thank you for that.

And that's all the announcements I have. Does anybody else have an announcement they want to make before we move on with the agenda?

All right. Hearing none, our next item is the adoption of the agenda. Like I said, they're on the back table for our visitors and guests, if you don't have one. And board members should have those, so do we have any items we want to add to the agenda?

Yes, sir.

MR. ENG: Yes, I would like to comment to add the Wacker Polysilicon mechanical integrity and RBI technical package for today's
open discussion, please.

CHAIRMAN MORELOCK: Okay. Do we have a package for that?

MR. CHAPMAN: I have it upstairs.

CHAIRMAN MORELOCK: You have it upstairs?

MR. CHAPMAN: Yeah. When we take a break, I'll run up and get it.

CHAIRMAN MORELOCK: Okay. All right. So let me add that to the agenda as -- is this just for information or for vote?

MR. ENG: It's no voting. It's open discussion and our presentation of the package to the board.

CHAIRMAN MORELOCK: Okay. Let's add that as Item 14-17, and we'll let -- we'll let Assistant Chief Chapman get that package to the board members. We'll take a break this morning and give you time to bring that down to us so we can at least have it before the board.

MR. ENG: Thank you.

MS. EWELL: He said open discussion, not new business.

CHAIRMAN MORELOCK: Yeah, we're not going to vote it. We're just going to add it as
an item to the agenda, but we won't vote it,

so . . .

Okay. Any other items?

All right. Hearing none, then, do I have a motion to accept the agenda?

MR. ROBINSON: So be it.

DR. CANONICO: Second.

CHAIRMAN MORELOCK: Second?

Any more discussion?

I'll call the question. All in favor say, "Aye."

IN UNISON: Aye.

CHAIRMAN MORELOCK: All opposed?

Abstentions, not voting?

All right. We have an agenda.

Board members will be required to complete Conflict of Interest statements and turn that in today before we leave. And so you should have those before you, so please fill those out, and we'll get those to the board unit.

And any items today, as we go through the agenda, if you have a conflict of interest with any of these items, please make that known before we discuss the item, and I'll do my best to remind everyone of that on each item. So
bear that in mind.

Okay. Next item is the chief's report.

MR. CHAPMAN: Okay. Number and inspection done for this quarter was $9,045.

Total delinquent is $912 from the State inspector, $1,105 from the insurance and agency, which is a total of $2,017.

The number of code violations found was 13, and 5 was uncorrected.

QC review performed was three, and one boiler variance inspector was done. This is as of July 2014 in September. This is just some information that was put out on it. We're still looking for a chief inspector, and we did interviews for the Montgomery County for a Boiler Inspector 1. And all the training from the national board have been completed by all the state inspectors.

And that's all as for the chief report.

CHAIRMAN MORELOCK: Any questions of Mr. Chapman? Comments?

All right. Hearing none, then, we will move on.
We have no old business on the agenda, so we'll go on to Item 7, which is new business.

And the first item we have will be 14-12 from the University of Tennessee for their request for a boiler attendant variance. And just so everybody knows: When it's your turn, we'll call you up, and you get to sit in these two hot seats up here and make your presentation.

And so when you come forward, introduce yourselves so Debbie can get that into the minutes, and then present your item. Okay?

All right. So 14-12, University of Tennessee, you're up.

MR. CAIN: I'm Bill Cain with Barham/Cain/Mynatt, engineers, representing the University of Tennessee.

And the university has two new boilers that they're requesting an operator variance on, as indicated in our systems operation manual. These boilers are located at the Translational Science Research Building there on the campus.

The university already has several other boilers that they currently have a variance
on and they monitor, and this boiler would be
monitored in the same location as the other
boilers at the central plant or the central energy
facility on South Dunlap Street. The existing
staff would be in charge of monitoring the
boilers.

There's the building right next to it, which is the basic clinical science building
or cancer research building, currently has two
boilers that are being monitored, and just a few
steps away from this building.

I'm not sure what other information
you would need at this time, --

CHAIRMAN MORELOCK: Well --

THE WITNESS: -- this being my
first trip up.

CHAIRMAN MORELOCK: Yeah, being
your first time. What we're really shooting for
is to just discuss what normal operation of the
boiler is going to look like, how the monitoring
station is going to operate, who is going to
attend the boiler actually in the field, and how
will the remote station interact with the boiler
attendant, and how will you handle emergencies.

MR. CAIN: The boilers, there's a
list of operating personnel that the University of Tennessee put together for us. They -- the boilers will have -- be monitored with a HAWK system, and then that HAWK system is integrated into a building management system, a Johnson Controls building management system. It has all of the alarms and safeties monitored at the remote location.

There's a person permanently at that remote monitoring station 24/7. At the end of his -- end of his shift, he goes over and actually lays eyes on the boilers and looks at them. If there is an emergency, there's -- in the operation manual -- which there is a copy there at the facility, a copy at the remote monitoring facility, and a copy at the central plant. It has a tab for emergency procedures. They've got a boiler emergency call list on -- person to call if there is an emergency. And the operating personnel, like I said, will look at the boilers every four hours.

Let's see what else they have. I think each one of the operating personnel, they do have training, and with some training checkoff sheets in the back of the operator's manual.
They've got a list of the boiler plant operators in Appendix E-1 of the operation manual, which they list in -- two, four, six, eight, ten plant operators were in charge of looking at this facility.

Any newly hired employees were -- will have to go through the training before they start work.

The HVAC operations supervisor is responsible for all aspects of training.

Like I said, there is a training log in the operation manual in Appendix H.

CHAIRMAN MORELOCK: Okay. All right. Before we go any further, are there any conflicts of interest?

Hearing none, I'll open the floor for discussion. So what comments do you have?

MR. ROBINSON: Mr. Cain, this question -- I'm going to direct this question to Mr. Jackson.

I notice that he's got several of the boilers on premises, and it shows that they possibly were activated from 2003 through 2007. Have we performed a renewal site visit?

MR. JACKSON: I was sitting here,
the same thing in my mind. I've been doing it for seven years, and I don't remember these people, about going and looking at their program.

MR. ROBINSON: Mr. Cain --

MR. JACKSON: I don't know if their certificates are current.

MR. ROBINSON: Mr. Cain, you understand what we're talking about, right?

MR. CAIN: Yes, sir.

MR. ROBINSON: What it is, is we put in place a three-year requirement that once an existing variance has been granted, then what we do is we reevaluate -- will audit that program process three years later. And what we've just revealed is that there's a good possibility that you had not had an audit for those existing units since possibly '03. I guess the point to the board is that we need to make a recommendation to at least have Mr. Jackson perform a site survey so they can become up-to-date when you perform this variance based on if it's approved or not.

MR. JACKSON: Sam, do we have a current manual on it?

MR. CHAPMAN: We have a new one.

MR. JACKSON: Yeah. But not for
the existing?

MR. CHAPMAN: Not for the existing one.

MR. JACKSON: We'll need a manual.

CHAIRMAN MORELOCK: Well, just as, I guess, a point of order, we certainly need to check the existing variances, but we're voting the current variance for these boilers in this manual, so it's a point well-taken.

MR. CAIN: That's good to know.

Yeah, I need to tell Bruce Stiles at the University of Tennessee to be sure and get the manuals up here. I was under the impression he had them. So if he doesn't, he needs to get them up here.

CHAIRMAN MORELOCK: He may very well have them. Every three years, they're renewed. So yeah, but that would be your other variances.

MR. ROBINSON: I'm kind of putting the cart before the horse, Mr. Cain. Thank you for your -- coming to meet with us today.

In looking over your manual, it looks pretty good. I was unsure -- just a few questions. And one of the questions I had was:
Are you -- is this a conception, as far as your installation of a microprocessor, or have you already had it installed?

MR. CAIN: It is already installed. And right now, the contractor is in the -- working on his punch list, getting everything ready for the project to be turned over to the owner for substantial completion. Both boilers are operating right now.

MR. ROBINSON: And they're using the microprocessor right now?

MR. CAIN: They're not using it for remote operation. They have a boiler operator there on-site, but they do have it up and running, yes, sir.

MR. ROBINSON: When do you anticipate that being ready?

MR. CAIN: I think it's ready now.

MR. ROBINSON: Okay. Where you made a notation on the first page, you had indicated GEB. And I -- this is just editorial, but I had a -- if you moved the actual definition for GEB to the second sentence, it would help. Because I looked for it, I saw it in the abbreviation, and I kind of got stuck, and I
started chasing around other stuff after that.

MR. CAIN: Okay.

MR. ROBINSON: On page 3, you have the boiler attendant classification. What it is, you said -- you had two different terms you used on that. You had one term you used as a senior power plant operator on page 4. So the boiler attendant, is he, slash, the senior power plant operator also?

MR. CAIN: Yes, sir.

MR. ROBINSON: Okay. On page 3, you just called him the senior plant operator or HVAC supervisor. I kind of -- it would be great if you would have had that a little bit before, because then I would have known that that was the actual guy that's going to be there operating the boiler as well. A definition of some sort.

MR. CAIN: Okay.

CHAIRMAN MORELOCK: That's one of the things that we stress to the -- to all the manual holders is: Your job titles and nomenclature and all needs to be consistent throughout the manuals, your job descriptions and all that, because we don't know your facility like you do, so it can lead to a little bit of
MR. ROBINSON: I saw in the work scope somewhere that you guys were also going to -- it looked like you had gotten a quote for propane. Are you using propane, slash, gas on this boiler?

MR. CAIN: No, sir. It's No. 2 fuel oil, diesel.

MR. ROBINSON: No gas?

MR. CAIN: It's gas or No. 2 fuel oil.

MR. ROBINSON: And not propane?

MR. CAIN: And not propane, yes, sir.

MR. ROBINSON: Are you planning on monitoring the boiler operation 24 hours?

MR. CAIN: Yes, sir.

MR. ROBINSON: And who is going to do that?

MR. CAIN: The University of Tennessee, the power -- senior power plant operator.

MR. ROBINSON: That's in the manual?

MR. CAIN: Yes, sir.
MR. ROBINSON: Can you kind of -- I
looked for it. I didn't see it. I probably
overlooked it.

MR. CAIN: On page 3, personnel
type at remote stations, the remote station will
be continuously staffed by senior power plant
operators.

MR. ROBINSON: Very well. Thank you.

On your log, I think you had a note
for low-water test, but then you had indication of
remote. Are you testing a low-water cutoff
remotely?

MR. CAIN: No, sir.

MR. ROBINSON: Let me take -- let's take a look at that. At the bottom where it said
"Remote tests," then next to it, it has "Column
blowdown" and "Boiler blowdown."

MR. CAIN: I'm sorry. Which page are you on?

MR. ROBINSON: F1, the appendices.

MR. CAIN: Okay.

I believe -- well, the first shift,
second shift, and third shift have to sign off on
their blowdowns, as they do there at the site.
That's at the -- actually at the boiler.

CHAIRMAN MORELOCK: So is the remote tests, is that just a sign-off for each shift where you do the remote -- you're doing a test of the remote station? And that's not specifically for a blowdown or -- a column blowdown or a boiler blowdown?

MR. CAIN: No, I believe this is for the column blowdown and the boiler blowdown that's done at the boilers.

CHAIRMAN MORELOCK: Okay.

MR. ROBINSON: Could you dress that up a little bit and either -- you use the word "believe." You used it. I didn't say it.

MR. CAIN: Yes, sir. That is correct.

MR. ROBINSON: Thank you.

I'm very happy Shelby County -- you guys, you offer first class training licenses. Are there any other prerequisites that you guys are doing over there that we don't do over here beside --

MR. CAIN: I'm not -- I don't know for sure.

MR. ROBINSON: Okay. One last
question, Mr. Cain. How does your mechanical organization chart fit into the charts in G1 and service specialists? Because it -- they are two different names.

CHAIRMAN MORELOCK: Yeah, I had that question as well. The organizational charts, E1, G1, and G2 need to match. That's the basic concern. Because you've got three organizational charts in the manual.

MR. CAIN: The chart E1 is for the UT facility, but it lists all the personnel.

CHAIRMAN MORELOCK: And Appendix G where you have your job descriptions, you've got two organizational charts in there as well, G1 and G2. Just, you just need to make sure that all those agree.

MR. CAIN: Yes.

MR. ROBINSON: Just keep the terms the same. It's an editorial comment. So when Mr. Jackson -- I'll tell you what's going to happen. Mr. Jackson is going to take your procedure, after you put those comments in there, and he is going to verify that you say what you do and you do what you say.

MR. CAIN: Yes.
MR. ROBINSON: That's all I have.

CHAIRMAN MORELOCK: Any other comments?

DR. CANONICO: The only question I had is training of operating personnel on page 7. I don't know if I'm missing something, but it says (as read): The basic training instrument will be a copy of this systems operation manual. For some reason, that strikes me as not much training.

MR. CAIN: Yeah, that's --

DR. CANONICO: Middle paragraph on page 7.

MR. CAIN: Yes, sir. I see that.

Basic training instrument. I think what is meant there is that the -- each boiler operator will have this manual with them when they go through their training. I'd have to verify that for sure.

DR. CANONICO: What other training do they get besides reading the manual?

MR. ROBINSON: Explain -- like, you guys are certified class 1 boiler operators. What kind of training is there?

MR. CAIN: I would have to go back and ask them to give me a list of everything that
they specifically do in their training, because I
don't have that in front of me right now.

CHAIRMAN MORELOCK: Well, I mean, you could just make a statement in the manual that
obviously this systems manual, in conjunction with
the training required to maintain that licensure,
is your training program. Do you agree with that?

DR. CANONICO: In Memphis? They
get their certified --

MR. ROBINSON: Class 1 operators.

CHAIRMAN MORELOCK: Yeah. I think
that would satisfy.

DR. CANONICO: That would take care
of it. Thank you.

MR. CAIN: Thank you.

CHAIRMAN MORELOCK: Any other
questions or comments?

MR. BAUGHMAN: Yes, sir.

CHAIRMAN MORELOCK: Go right ahead.

MR. BAUGHMAN: And I -- we get on
the training end of it because there is so much
lack of training out there that we discuss
throughout the year at various meetings, so one of
the things I look at in particular, too, is just
going over -- even though it's not included in the
variance, but you've got a DA system for your feedwater that's feeding water to the systems. And looking at it, it's -- is any of the monitoring tied into the DA itself? I notice that some of the log sheets attend to tank level, tank temperature, but I didn't know if it was actually tied in on your system or not.

And it's not a requirement, but I was curious.

MR. CAIN: That's a good question, because I'm not sure -- I'd have to look on this side. Alarm points.

MR. BAUGHMAN: And one of the reasons, Mr. Cain, that I ask is that we had an incident back a few years ago concerning a DA, and it very much has the same potential power to relocate the building as what the boilers do, so -- but it looking -- in looking at it, the operating pressure of the DA is 60 psi. The safety valve setting is 150. And I did not see the design criteria DA itself. But it's got an internal steam heater for 30 to 250 psi, maximum steam supply, 100 psi, but I did not see the design criteria for the DA itself. I see what the valve settings are, the operating pressure, and so
forth. And it just gave me a little bit of
question on it as far as any of the information
that may be available for that.

MR. CAIN: Just going through the
list of the alarm points for the HAWK system, I do
not see anything on the DA system that's being
monitored.

MR. BAUGHMAN: Do you have a
Level-Master controller?

MR. CAIN: We do monitor the water
level in the boilers, yeah.

MR. BAUGHMAN: Okay. Do you know
what kind of -- there's no -- the Level Master
isn't tied back in or we don't have another system
control on the DA itself, though?

MR. CAIN: I'd have to go back and
verify that to see if that was the case.

MR. BAUGHMAN: Okay. But just
offhand, you're just not familiar with it?

MR. CAIN: I'm not familiar with
that part of it, no.

MR. BAUGHMAN: Okay. Are all the
personnel that are listed here for the variance
training for operators, are they still at the
facility?
MR. CAIN: Yes.

MR. BAUGHMAN: That's it.

CHAIRMAN MORELOCK: Okay. The only other comments I would add to what's already been stated is just -- just some for-your-information items is, in your manual, you list specific names as opposed to just job titles. And that's perfectly fine, but just be aware if you ever have a personnel change, that's going to require you to have to modify your manual and get it reapproved. So just bear that in mind.

MR. CAIN: Okay.

CHAIRMAN MORELOCK: And that's all the comments I have. So with that said, just know as well, our approval of your variance today was contingent upon a site inspection by Deputy Inspector Jackson, and his inspection will basically be a demonstration of what your manual says, make sure that what you're saying is actually what you're doing, and the incorporation of comments that are presented this morning in this meeting. So -- just so you know that as well.

So with that, do I have a motion for this item?
MR. JACKSON: Mr. Chairman?

CHAIRMAN MORELOCK: Yes.

MR. JACKSON: Is this boiler tied into the same alarm system and control as the existing ones under the variance program?

MR. CAIN: Yes.

CHAIRMAN MORELOCK: It is?

MR. CAIN: At the central monitoring station, yes.

CHAIRMAN MORELOCK: Okay. All right. And I guess Mr. Jackson's question, then, is: How does that affect the overall monitoring of the boilers under variance today?

So just bear that in mind as well, too.

Okay. Any other questions or comments? Do I have a motion?

MR. ROBINSON: Motion to approve.

CHAIRMAN MORELOCK: I have a motion to approve, contingent upon site inspection by Deputy Inspector Jackson. Do I have a second?

MR. BAUGHMAN: Second.

CHAIRMAN MORELOCK: I have a second? Okay. Good.

All right. I'll call for the
question then. All in favor say, "Aye."

MR. ROBINSON: Aye.

MR. BAUGHMAN: Aye.

CHAIRMAN MORELOCK: Opposed?

Abstentions?

DR. CANONICO: (Raising hand.)

CHAIRMAN MORELOCK: One abstention, not voting. All right. So we have an approved variance.

MR. CAIN: Thank you.

CHAIRMAN MORELOCK: You're welcome to stay and -- or you're welcome to leave if you need. But you are welcome to stay and -- stay and visit with us a little longer.

MR. CAIN: Okay. Thank you.

CHAIRMAN MORELOCK: Thank you.

All right. Our next item is Item 14-13, which is BAE Systems Ordnance, and they're requesting a variance as well for four high-pressure boilers.

Gentlemen, if you'll introduce yourselves again and present your manual.

MR. FLOWERS: I'm David Flowers. I'm with Combustion and Control Solutions. We're located in Chattanooga, Tennessee. We are a
vendor of BAE Systems.

This is Roy Wood. He is a manager of utilities for BAE Systems located in Kingsport, Tennessee, 4509 West Stone Drive.

With us also is Charlie Phillips who is the control systems engineering specialist with BAE Systems, and Allen Tripp who is the owner and president of Combustion and Control Solutions.

As stated in our cover letter, this is a request for a new variance for four boilers for a Miura 300 horsepower high-pressure boiler --

THE REPORTER: Sir, would you slow down and speak up for me?

MR. FLOWERS: Yes.

Okay. This is a request for a new variance. I appreciate the time of the board to consider this.

BAE Systems is located at 4509 West Stone Drive in Kingsport, Tennessee. And this is request for variance on four new high-pressure boilers, 300 horsepower each. Our manuals were submitted previously, which the board has. It goes through the cover letter request, a system of the current boiler setup at Building 262 at the facility. We go into, then, the computerized
remote monitoring system and description or just microprocessor control.

We then go into the remote monitoring personnel organizational chart. We spell out very specifically the titles and descriptions, those folks' responsibilities, and their training. Section 5, which is going to be the emergency procedures call list, is there as well as any and all associated logs with normal and emergency operations.

CHAIRMAN MORELOCK: Okay.

MR. FLOWERS: And we'll be happy to answer any questions you might have.

CHAIRMAN MORELOCK: All right. Are there any conflicts of interest with this item?

Okay. Hearing none, what comments do you have? Go ahead.

MR. ROBINSON: Mr. Flowers, thank you for attending our board meeting. I noticed in here in your manual, you guys are using a fiber optics network?

MR. FLOWERS: That's correct.

MR. ROBINSON: And not being really attuned to what's going on in the fiber network environment, how has that been working out for
MR. FLOWERS: I will refer to
Mr. Phillips and let him answer that question for you.

MR. PHILLIPS: It works really good.

MR. ROBINSON: Any failures?
MR. PHILLIPS: We had three or four other systems at the plant, not boiler-related, over fiber optics, E-Stops and things. They work really good.

MR. ROBINSON: So if they were to fail, what would happen?
MR. PHILLIPS: We would quit remote monitoring and go to the boiler house monitoring, operating.

MR. ROBINSON: Have you heard of any failures? How new is the system? Enlighten me, because I'm curious to know.
MR. PHILLIPS: The fiber-optic E-Stop systems that we are currently using in the plant have been around for ten years, probably, some of them. Some of them are a little newer.

MR. ROBINSON: And they're perfect?
MR. PHILLIPS: I mean, up to now, I
MR. ROBINSON: I notice that you're using the E-Stops with the fiber systems. So there is no risk of hitting the E-Stop and it not working?

MR. PHILLIPS: No. We've got UPS backup power for the E-Stop circuits power up in the case of a power failure at either end.

MR. ROBINSON: Your E-Stops are interconnected where on the boiler?

MR. PHILLIPS: They're tied into the current E-Stops that were put in by the manufacturer.

MR. ROBINSON: So you've got two separate circuits to stop the boiler?

MR. PHILLIPS: Well, we tie all our circuits in series with existing circuits, so it's actually one big circuit.

MR. ROBINSON: One series?

MR. WOOD: I might make a comment on that.

MR. ROBINSON: Please do.

MR. WOOD: Locally at the building itself -- excuse me -- the -- at the building itself, we've got E-Stops for each boiler, plus
we've got E-Stops at the exits of the building.

Then these are remote -- these are remote E-Stops, of course, you know, at the power house. It's coal-fired boilers, approximately -- because we've got, laid out in here, it's about 2,000 feet. It's very close.

And so this is -- and the guys are in the control room, and we'll go into that, I guess, the different operations and things. But, like, the fireman -- we call the guy that's there in the control room -- monitors there, you know, 100 percent of the time. He's there all the time. We've got other guys out rolling and so forth, but he's got two monitors there he's watching. He's got a monitor that shows exactly what's in the building being monitored, plus we've got four cameras set up to watch everything.

And then the E-Stops there are located just behind him up on the wall a little bit. We put them so nobody would accidentally bump into one. So we've got an E-Stop for each boiler. If we look at it and there's -- we recognize it's just an isolated one boiler, we could just stop one boiler.

And then we have a master E-Stop
that we -- if something bad goes on, we would hit
the master and we'd shut the whole building down.
So we've got one for each one plus that.

And like Charlie alluded to, it's
essentially the same as what's in the building,
just in parallel.

MR. ROBINSON: I understand. Yeah.

Very good. Thank you.

MR. FLOWERS: We do state on
page 19 at the bottom that in the event there were
a failure in the fiber-optic network at that
point, the variance is suspended, and we go back
to the 20-minute rule until that's rectified.

MR. ROBINSON: I was more concerned
with the length to shut the boiler down, knowing
that it's fiber optics and not really in tune to
what's going on with the electronics there.

So I need to feel that out.

MR. WOOD: Like you said, anything
manmade could fail, but reliability is very, very
good. We've had this in other things in the
plant. We've had very good success. If anything
did fail on it, like David said, we would go to
the -- we'd go to the building. We'd have an
operator go to the building and secure it.
MR. ROBINSON: You're still equipped with the hard CSD-1 lockouts, the manual resets?

MR. FLOWERS: Yes.

MR. ROBINSON: Okay. And you're not overriding that with anything, --

MR. FLOWERS: That is correct.

MR. ROBINSON: -- the manual, that's separate of the controlling microprocessor?

MR. FLOWERS: That is correct.

MR. ROBINSON: Okay. I saw the DA tank, and like Dave, the question I'm going to ask is: What is the valve settings for the two valves on the DA tank?

MR. FLOWERS: I would have to confirm, but I believe 50 psi is the relief valve setting on the vessel itself. There is also one downstream of the regulating station were it to fail, and would relieve the full capacity of the valve.

MR. ROBINSON: Okay. Is that DA tank vented to the atmosphere?

MR. FLOWERS: No. It's pressurized DA.

MR. ROBINSON: Okay. That's what I
Okay. You just had a typo right there at the description on page 19, second paragraph. No big deal. That's all I have.

You've got to forgive me, but you're going to submit it to somebody. I'm the world's worst speller, so forgive me.

That's all. No further --

CHAIRMAN MORELOCK: Any other comments?

MR. BAUGHMAN: Yes, sir.

Mr. Wood, how many boilers do you operate within this -- go ahead. I'm sorry.

MR. WOOD: Well, the coal-fired steam plant we had, we had four stove-fired boilers, coal-fired boilers, rated at 100,000-hour each at 300 psi. They're nameplated higher than that, but, you know, over time, with the -- we had ESPs, and now we've got bag houses and so forth, so we've been downgraded to 100,000.

So we never operate more than two of them at a time, so the guys there in that fire house would be operating two of those boilers -- there's three guys on the shift -- which is in here at around 200 and so forth.
Then, over at this building we call 262, the gas-fired boilers, there would be four of them, and it's -- we've got -- that's right there. We've got three right now, and we're putting another one in. But we've got people that are full time right now and everything.

So would be, over there at the gas-fired boilers -- is that your question, or are you wanting both, I guess?

MR. BAUGHMAN: Well, there's four boilers listed with a "To Be Determined," so I'm anticipating that the three 2012s are operating presently, and would be tied into this variance. There's a boiler that has yet to be installed?

MR. FLOWERS: That boiler will deliver a week from today and will be installed prior to and tied into this same system prior to Mr. Jackson's inspection, upon approval, of course.

MR. BAUGHMAN: And then the drawings show future boiler 5 and 6.

MR. WOOD: Yes.

MR. BAUGHMAN: And so, I guess my question being is: When the boilers get added in, are we doing the variance for the three boilers
now, the four boilers? I guess when they add
equipment back in, that's a revision that gets
made.

But what I'm -- I guess what I'm
asking is, is since there's only three boilers in
there presently, does this variance cover those
three boilers, or are we covering the --

MR. FLOWERS: We're requesting to
cover the four.

MR. BAUGHMAN: Okay. I saw where
it was saying, "Our boilers." "We request for the
operation of our boilers," but I didn't
necessarily see where it had listed out the four,
offhand. So I may have missed that.

MR. FLOWERS: I think it's in
there.

CHAIRMAN MORELOCK: I had a similar
comment to that as well. And since your fourth
boiler is delivering next week, you need to make
application to Sam to get the Tennessee number and
get all the boiler data updated in this manual.
You probably want to update this boiler layout
just to show that four boiler, not a future
boiler, but an active boiler so the manual will
truly reflect what you're asking for. Because it
is a little confusing to say you're asking for a
variance on four boilers but you're only showing
three.

MR. FLOWERS: Well, our attempt was
to bring this subject up and let you guys be aware
of exactly what the situation was. But that will
be changed and will be noted in the --

CHAIRMAN MORELOCK: Okay. Very
good.

DR. CANONICO: This is the first
time, at least, that I have seen any requests for
a fiber optics type of device. And you've got
experience with it and you're totally satisfied?

MR. WOOD: Yes. Yes, we -- and, of
course, we've tried it and everything, tested it
and so forth, and we're using -- as Charlie said,
we're using more and more of that, you know,
through the system in the plant.

MR. ROBINSON: What were the
benefits?

MR. WOOD: Well, it's just --
Charlie can tell you. I think it's a whole lot
easier --

MR. PHILLIPS: With fiber optics,
you're not -- when you're going outside of the
building, between buildings, you're not subject to
lightning coming in on it, any kind of
interference from high voltage lines or anything
like that. Fiber optics transmit, you know, clean
signals. So it just cuts down on a lot of noise
over your -- frequency noise over your lines, a
lot cleaner transition.

MR. ROBINSON: Let me ask you: In
the past, did you have experiences where you had,
you know, interference with the normal line? I'm
just trying to get a feel --

MR. PHILLIPS: Well, I have -- I
have seen a lot of -- not with E-Stop necessarily,
but copper lines -- not fiber, but copper, going
between buildings. I have seen interference, I've
seen noise, I've seen lightning damage a lot of
equipment. Fiber optics is a whole lot safer and
more reliable.

MR. ROBINSON: I'm sorry,
Dr. Canonico.

DR. CANONICO: I live in
Chattanooga, and our Electric Power Board provides
us with fiber optics for elevation and everything
else. And I must admit periodically, I have
problems, so I hope you don't have those similar
problems.

MR. PHILLIPS: Yes.

DR. CANONICO: The other question I had has to do with training. I didn't see anything in here specifically on training, but I may have missed it.

MR. WOOD: Well, we've got that in there. It's --

MR. FLOWERS: Section 4 is going to outline that.

DR. CANONICO: I'm sorry. What?

MR. FLOWERS: Section 4. If you start on page -- actually, 29 talks about the duties of the different personnel. And page 35 outlines the steam plant operator training, and that covers all of the people that are in this designated as steam plant operators in those different positions.

They have a 12-month apprenticeship program in which they are trained by several different personnel, including Mr. Wood and all the other folks that are on-site.

We then spell out that we have done a specific training, 12 hours of training on the operation of the Miura boilers when those were
started up. We'll go back over that again when we
start the fourth boiler up. But in my opinion,
they have a very extensive on-site training just
for boiler steam plant personnel.

   Also, too, once the -- and if the
variance is approved, we will train to the manual
as it is accepted.

   DR. CANONICO: Thanks.

   CHAIRMAN MORELOCK: Any other
comments?

   Mr. Baughman has already brought up
one of my comments about the fourth boiler, so
we've got that.

   I had a question on the checklist
on page 4, Item 20. We have an item here that
states (as read): Does the remote monitoring
system prevent unauthorized access?

   And your response to that is (as
read): BA internal site security.

   So how does that work? I didn't
see anything in the narrative as to how your
system is protected from unauthorized access.

   MR. FLOWERS: Well, the site itself
is very, very secure. It is a -- I'm not sure if
it's actually designated a DOD site, but it is
a --

MR. WOOD: Well, we operate the Army ammunition plant for the Department of Defense, so we've got armed guards. They don't carry flashlights; they carry more. So, you know, we've got guys in and out, and even the people that work there -- I've been there almost 30 years, and sometimes it's hard for me to get in. So it's -- you know, it's -- it is a secure site. That's what we're saying from outside.

Now, a person inside the plant, I mean, it's not secured from a person inside the plant which . . .

CHAIRMAN MORELOCK: Well, I mean, that's my question: What prevents somebody from accessing the monitoring program?

A lot of these systems are password protected and things like that, so that it's protected internally so that not just anybody can walk in and access your boiler monitoring system. They have to have a password or something like that to gain access to that.

MR. WOOD: Okay. Well, now, of course, along that line, what we're doing there in the coal-fired steam plant area of Building 200
is, we've got it monitored, we've got two
monitors, and they're displayed all the time.

We're not -- I don't think there's anything there
we're really trying to keep secure. It is a --
truly a monitoring. It's not anything that you
could do to -- there's no remote control or, you
know, a DCS system or anything like that for these
boilers. It's a -- so it's just strictly monitor,
other than the E-Stops on the wall.

So the thing that we could say
there, if we could make a little statement there
is the -- the boiler operator, the fireman that's
in that -- that's in that office, he doesn't let
just anyone wander into that office. He knows who
is going in or out of that office, and he's in
that office 24/7 -- he or a person, you know, of
equal training and grade and everything.

So it would -- that system would be
secured by the -- by the firemen. You could say
that -- we could say that. That room or that
office, yeah.

CHAIRMAN MORELOCK: We just need to
have a statement in there that -- obviously,
Charlie doesn't want just anybody coming in and
being able to access his programming and all that,
so just make a statement in your manual that you
protect that.

MR. WOOD: Okay. We can do that
with the -- really with the firemen that's there
in the control room, yes.

MR. PHILLIPS: The monitoring
system is password protected. Operators have a
log-in that lets them into it. But it doesn't
give them access to go in and change the program.

CHAIRMAN MORELOCK: Just write that
in your manual.

MR. WOOD: Yeah, they can't change
anything.

CHAIRMAN MORELOCK: Okay. Just
write that in your manual. That would be great.

MR. WOOD: Okay. All right.

CHAIRMAN MORELOCK: Let's see.

That's all the comments I have.

MR. BAUGHMAN: One other, Brian.

CHAIRMAN MORELOCK: Okay. Go right
ahead.

MR. BAUGHMAN: How often is the
system being checked, as far as its alarms? In
other words --

MR. WOOD: For the alarms?
MR. FLOWERS: We state at the beginning of each day shift, so once a day, once every 24 hours the remote monitoring system is tested.

MR. BAUGHMAN: Not once each shift, but just once every 24 hours?

MR. FLOWERS: That's correct.

MR. WOOD: We're doing it on -- well, we're doing it just a little bit more than that on the -- certain things, the -- every shift. We're doing the low-water -- the low-water alarms and so forth once every 12 hours, once every shift.

MR. FLOWERS: But the remote monitoring station itself would be, the roving operator calls in and confirms that the monitoring station has received a low-water alarm. That's -- we have in our manual currently that that will be done once every 24 hours.

MR. BAUGHMAN: That's what I'm reading on Section 4, page 30, normal operation duties the beginning of each day shift. Operator on duty shall contact firemen and so forth. The alarm shall be tested.

It says: Give notification to
systems being tested, and they are not required to shut down the respective boiler.

   But it didn't really specify how many times this water column -- it kind of makes it sound like it's under that once-a-day check, and that's why -- and there seems to be confusion a little bit between -- between how we're --

   MR. WOOD: We may need to clarify that just a little bit, but what we're doing is, we're working 12-hour shifts, 6:00 to 6:00. So each shift, at the beginning of the shift, then the guy -- the person that's the roving operator going over there to the gas-fired building, what he would do is he would go over there and he would notify by radio contact or phone -- radio probably -- the guy in the coal-fired steam plant to watch his monitor. "I'm going to do a low-water check on the boiler." So then -- "But this is not -- you're going to get an alarm, but you don't need to shut anything down. I'm here doing this."

   Then he would do it. He would perform that test, blow the water column down till he gets the alarms and so forth, and actually trip the boiler off. And then everything is okay.
Then we go about business. So it would be done at the beginning of each shift, once every 12 hours.

MR. BAUGHMAN: When it goes through this, we're getting more than just an alarm; in other words, we're not doing a shunt test, we're actually doing a positive check of the low-water cutoff?

MR. WOOD: We're actually doing the full test. When we do it -- and we're doing it right now. We're doing that -- we got guys there, of course, 24/7 right now until this would be approved, but right now we do it each shift. We go through that. It's a full blown -- you know, we do it -- we don't -- we're not just testing the instrument. We go in there and we actually blow the water column down. And you see the different levels. The indicators will go down and -- water levels, and then it will go through and give you a --

I'm sorry. But anyway, it -- slow down.

But it's -- it will go down through there, and it gives you the different probes, you'll see going. Then you get an audible alarm
and then you get -- the boiler actually will go in
the -- you know, post -- it will trip out. We let
the boiler dry off and then we'll reset everything
and come back. And that's the same thing we'll be
doing.

MR. BAUGHMAN: Okay. And that's
not quite worded in here as such. But I'm glad to
know that that's how you're doing it, Mr. Wood.
That's a very good way to do it.

MR. FLOWERS: And we'll clarify
that. It was apparently a miscommunication
between the two of us, and if they're doing
that -- I know they are doing a low-water test and
everything, normal boiler operation test every 12
hours. But we'll clarify that in the manual.

MR. BAUGHMAN: Thank you.

CHAIRMAN MORELOCK: Any other
comments? Anybody have any comments?

Yes, sir, Mr. Jackson?

MR. JACKSON: That doesn't sound to
me like they're testing the emergency shutdown.
If there's no alarm that goes on in the remote
station, and they're able to cut it off and
contact the boiler operator and so on and so
forth, as -- the way the program is set up, am I
1 understanding that it doesn't send the remote
2 alarm?
3 MR. FLOWERS: No, it does send the
4 remote.
5 MR. JACKSON: And what about the
6 personnel in there? How do they respond? They
7 shut the boiler down?
8 MR. WOOD: No, sir. What they'll
9 be doing is, the guy -- the roving operator going
10 over to the building to the gas boilers, he'll
11 call on the radio to the guys at the coal-fired
12 steam plant and say, "I'm getting ready to check
13 the low-water cutoff. This is a test, this is a
14 check of the -- you don't have to shut the boiler
15 down."
16 And -- but we'll -- when we go
17 through there and do it, he'll go through there
18 and he'll do all his checkout, but the guy at 200
19 will confirm that he did get the alarm, he did get
20 the alarm but you had low-water cutoff, and if it
21 was going on other than that, he would shut it
22 down.
23 But we actually let the boiler go
24 all the way down and shut down itself, then
25 restart it.
MR. JACKSON: I can tell you right now I'm not going to do the low-water alarm. Everybody wants to do the low-water alarm. I'm going to pick some default, close the vent, low-water alarm, and that boiler is going down. And I'm going to check the remote station personnel to see if they respond to the emergency program.

MR. WOOD: Okay.

MR. FLOWERS: That's fine, and we've got our alarms spelled out in the manual and what to do --

MR. JACKSON: Now, do you have the fault messages located in your manual?

MR. FLOWERS: Yes, sir, we do.

MR. WOOD: Yes.

MR. JACKSON: Well, I'm going to pick one of them.

MR. FLOWERS: Okay. We'll be ready.

MR. JACKSON: Everybody wants to do low-water.

MR. FLOWERS: Okay.

CHAIRMAN MORELOCK: Well, and again, like I stated earlier, Mr. Jackson will
come and make sure that what you're actually doing
matches the verbiage in the manual. And we all
know about communication, so that's why we do this
is to make sure they both line up. Okay?

All right. Any other questions or
comments?

All right. Do I have a motion?

DR. CANONICO: (Raising hand.)

CHAIRMAN MORELOCK: Yes?

DR. CANONICO: So be it.

CHAIRMAN MORELOCK: Okay. So we
have a motion to approve this variance, again
based on contingent -- contingent approval based
upon a site inspection by Deputy Inspector
Jackson.

So do I have a second?

MR. ROBINSON: Second.

CHAIRMAN MORELOCK: I have a
second. Any other discussion?

Okay. I'll call the question. All
in favor say, "Aye."

IN UNISON: Aye.

CHAIRMAN MORELOCK: Opposed?

Abstentions? Not voting?

Gentlemen, you have a variance.
MR. FLOWERS: Thank you.

MR. WOOD: Thank you.

CHAIRMAN MORELOCK: Thank you.

Again, you're welcome to stay. If you have other pressing engagements . . .

All right. It's 10:00. Let's take a 5-minute break, let everybody stretch just a minute, get you some coffee. We'll resume at 10:05.

(Recess observed.)

CHAIRMAN MORELOCK: All right, everybody. Let's resume.

We are on Item 14-14, which is Mitsubishi Electric Power Products, and they are here to present a request for variance to operate two high-pressure boilers.

So gentlemen, if you'll come forward and introduce yourselves and present your manual, please.

MR. HERTTER: Ryan Hertter with Hertter Mechanical Services.

MR. BONDI: And I'm Mark Bondi with Mitsubishi Electric.

MR. HERTTER: We'd like to thank the board for considering Mitsubishi's request for
boiler variance for remote monitoring. This facility has been in operation about a year and a half. It's got two high-pressure steam boilers. They are Cleaver-Brooks boilers, so the operating system is a HAWK controller.

The whole facility is under a Trane energy management system. On top of the energy management system, the whole facility is continuously monitored by Trane Intelligent Services, a 24-hour remote off-site monitoring.

The facility is continuously, 24/7, attended by a Class 1 boiler operator, and the intent of this variance is to simply allow that attendant more time to perform some other tasks.

CHAIRMAN MORELOCK: Okay.

MR. HERTTER: Anything else?

MR. BONDI: No. I think it's got 350-horsepower boilers, two. Currently, it's a lag system.

Like I said, they're all -- all of our attendants are Class 1 licensed in Shelby County, 24/7 monitored.

The off shifts are monitored electronically. Actually use a smartphone, have a touch point at each boiler and the DA. And those
reports are given to me monthly to be reviewed.  
And I think there's a sampling here. Their average: about 95 to 100 percent.  
So they're definitely making their way to the boilers nightly every 20 minutes. And again, we rely on their licensure to give them the authority to monitor these boilers.

CHAIRMAN MORELOCK: Okay. Do we have any conflicts of interest for this item?

DR. CANONICO: No.

CHAIRMAN MORELOCK: Okay. Hearing none, I'll open the floor for discussion.

DR. CANONICO: I don't have much to say other than I like this idea of the operating engineer license. I'd like to see it statewide. That's it.

CHAIRMAN MORELOCK: All right.

Very good. What other comments?

MR. ROBINSON: To either Mr. Bondi or Mr. Hertter: You guys did mention the boiler operating -- Class 1 operator. What -- do you know -- the question came up earlier about the criteria to -- what kind of training they undergo. Do you know?

MR. HERTTER: Actually, if you look
in the last page of Tab 4 -- well, wait a minute.

Tab 3. I'm sorry. This is a sheet for the exam course prep. It's a 45-hour course to be taken before you take the test.

MR. ROBINSON: Okay.

MR. HERTTER: It kind of goes through some of that.

MR. BONDI: And again, a requirement of Mitsubishi Electric is, again, to partake in this exam and get your operating license. But also, this would be the course you go through before -- certainly before you take the test. But our current chief operator works day shift, does all our monitoring. He took this test -- this course and passed long before we ever hired him. But he's got many, many years' experience. But going forward, if we were to train anybody to be a licensed one, of course, we would send them to this coursework and then prepare them for the exam, and they would still be required to have that Class 1 operating --

MR. ROBINSON: What exactly is a third class as opposed to a first class?

MR. BONDI: Third is low pressure.

Of course, we want high pressure, so we require
first class. If we got our hands on a third class
and he could work days and work under our
operators, the first class would be an ideal
circumstance, too.

MR. ROBINSON: Okay.

MR. BONDI: And we do have an open
position to back up our first class, first shift.
Right now, the service we contract with backs them
up when he's not available, vacation or otherwise.

MR. ROBINSON: Okay. Very nice.

I did have a -- I'm looking at your
remote monitoring computer refresh speeds. Who
knew, right? 5 minutes, right? Less than 5
minutes.

MR. HERTTER: Yeah.

MR. ROBINSON: That's a long time.

MR. HERTTER: Well, I don't know
what the refresh rate is. Obviously, it's -- it's
the network speed, and I don't know how to
quantify that -- the speed of the network.

MR. BONDI: I think you could say
it's as close to real time as possible. In
reality, it's all our network, the Mitsubishi
Electric network.

MR. ROBINSON: Clarify this for me.
The refresh speeds are truly separate than the boiler operating parameters. In other words, if the boiler goes to failsafe, and the computer decides to refresh, the boiler is going to do what?

MR. BONDI: So you're saying if there is some delay in the monitoring versus the actual alarm?

CHAIRMAN MORELOCK: Or actual shutdown of the boiler. Would it wait 5 minutes to shut the boiler down?

MR. HERTTER: No.

MR. BONDI: That may be a mistake on our part. Absolutely not.

MR. HERTTER: The remote monitoring is on top of the controller, so it's just being monitored through the --

MR. ROBINSON: I just wanted to hear you say that.

Boiler and pressure watch description. G4S. You clarified G4S, but the training for G4S, I didn't see it.

MR. BONDI: Yeah. Again, typically the gentlemen that take these roles, they're boiler operators by trade. And, of course,
they're licensed -- you know, they're the licensed
Class 1 operators. But they will step in these
roles as also security guard to play two roles at
once.

But this doesn't interfere with
their 20-minute checks. They carry the operating
device, which is their smartphone, which receives
these alarms and has all of our contact
information and, of course, uses to scan the
badges with. Their training is really revolved
around -- typically around the security role more
than it is the boiler operator role. But again,
we rely on Shelby County --

MR. ROBINSON: Do you train the G4S
operator? I mean, do you give him physical
training to --

MR. BONDI: Yeah. It's -- they
were -- each operator works alongside our chief
operator which was factory-trained by
Cleaver-Brooks. And he's been there since the
commission of the boilers.

But they'll actually work with him
to familiarize themselves with controllers, but in
all reality, they play a monitor role and a
response role. They don't go in and make
adjustments. They have to make a phone call to
either myself and our chief operator or, you know,
a service technician if they got that far.

But they didn't have any authority
to E-Stop and shut the system down absolutely and
investigate a problem. But they really don't make
adjustments, per se.

So other than familiarity between
the screens of the HAWK controller in order, where
to look. There is really no interaction between
them and -- you know --

MR. ROBINSON: Is there any
documented training, objective evidence?

MR. BONDI: Other than them
carrying their license and the time spent, I can't
say --

MR. ROBINSON: G4S.

MR. BONDI: I can't say that there
is anything documented.

MR. HERTTER: The plant does a
general training with personnel. But as far as
specific training on the boiler --

MR. ROBINSON: Or remote system.

MR. HERTTER: -- or the remote

system, it's more of a --
MR. ROBINSON: Informal?

MR. HERTTER: -- informal --

MR. BONDI: Yeah. And it's not

that it couldn't be formal. It's -- what they do
go through, as you'll see in here is a contractor,
sort of -- as a contractor, they're trained by us
to, you know, follow certain guidelines. But it's
not specifically a controller or anything related
to it. Not that we couldn't document that.

MR. ROBINSON: I would like to

see -- I saw a description for G4S. Said the guy
could be 18 years old. Nothing against
18-year-olds. I was 18 years old.

MR. BONDI: Certainly.

MR. ROBINSON: But I just didn't

feel a warm fuzzy when there was no given
instructions or formal instructions given to that
guy to say, "When this happens, this is what you
do."

I didn't see that. If you --

CHAIRMAN MORELOCK: Well, again,
it's what we've been talking about all morning is:
Just write down what you're actually doing, so
that the manual reflects what you're doing in the
field. Okay?
MR. HERTTEN: Okay.

CHAIRMAN MORELOCK: And training records is parts of that, so . . .

MR. BONDI: Sure.

MR. ROBINSON: That would help me, no doubt.

That's all I have.

CHAIRMAN MORELOCK: Any other comments?

MR. BAUGHMAN: Yes. And I've got to reiterate. In one area, it says G4S, and in another, it says GS4, just for what it's worth. Needs to be kind of consistent.

But I do have issues with boiler operator, upscale security officer. And I know that the requirement is: Must have an active license and/or certification as a boiler operator in the State of Tennessee or -- and/or.

We don't have any certification as a boiler operator in the State of Tennessee. We do in Shelby County.

MR. BONDI: Yeah, I think maybe it stated near the end of that, but yeah, I did note that actually just this morning as I was reading through it. But it didn't identify Shelby County.
MR. BAUGHMAN: And Shelby County is in here.

(As read): Must have an active license and/or certification as a boiler operator in the State of Tennessee -- which we have discussions about -- and/or Shelby County Tennessee, question mark.

MR. BONDI: Yeah, I think that may have been -- again, that was from the service, so it may have been a deterioration in communication between us and them. But we can get that straightened out.

MR. BAUGHMAN: So these upscale security officers are able to get a boiler operator's license for Shelby County --

MR. BONDI: If they passed the exam. And again, we get to -- also have a say in who steps foot in our plant also.

A good example is when we first got contracted with them, there was a certain individual who probably wasn't holding his own weight out there. And upon my complaints, they immediately made change to -- you know.

So again, these three gentlemen we know are, I want to say, some of the best I've
seen out there.

Yeah, I mean, we still have a say.

Like I said, an 18-year-old young man comes in -- or young lady -- and says, you know, "I'm a great boiler operator. Here's my license." Well, let's think it through first. So don't think that we have to take what they give us.

MR. BAUGHMAN: I notice in our pictures, which are nice, but we show a picture of the DA, which is a generic picture. Of course, it's not --

MR. BONDI: Right, the graphic, sure.

MR. BAUGHMAN: -- the DA you've got. And then -- but it does identify it as a DA with a particular number. And then we identify Boiler No. 1, 9651, which, there again, is a graphic. But we don't identify Boiler No. 2 for any particular reason, just Boiler No. 1 is in my particular manual. And not that it has to be in there, but the identification of the boilers, I take it, are actually through our drawings here.

And the list of equipment, unless I'm missing it, on the very first section under the boiler system, it lists out a very generic
listing of the equipment. And I'd personally like
to see a --

MR. HERTTER: Mr. Chapman already
inquired about that, and I've got an Appendix A
that lists out the nameplate data.

MR. BAUGHMAN: I missed that.

CHAIRMAN MORELOCK: Yeah, that was
a comment I had as well. That data sheet, you
need the boilers, the boiler numbers -- national
boiler numbers, Tennessee numbers -- so it's easy
to find that information.

MR. HERTTER: Right.

Another point: The address that
I've got in this manual, 2855, is what they used
during construction, but now they're 2865, so I
need to correct that in the manual.

CHAIRMAN MORELOCK: Yeah, that
would be good.

DR. CANONICO: On your first
drawing, C1-200, you show the boiler room and the
maintenance officer's remote monitoring
essentially in the same building.

MR. HERTTER: Correct.

DR. CANONICO: What if you had a
serious problem that wiped out all of them? What
would that do to you?

MR. HERTTER: Well, the --

DR. CANONICO: They're a little too close for my comfort. I guess that's the bottom line.

MR. HERTTER: Really, anywhere that has Internet connection, you could pull up the remote networking. The attendant actually has a phone, so he could be anywhere on the plant, not just in that boiler room. So it's -- there's multiple places --

DR. CANONICO: I'm less worried about the boiler room as I am the fellow who is sitting at that station, or people who are sitting at that station.

MR. HERTTER: Yeah.

MR. BONDI: Yeah, that would be my office. Yeah, there's actually a block wall between them, but again, I know it's far more dangerous than that.

They never sit still, believe it or not. They have many other checkpoints. We have a 350,000-square-foot plant, so he's -- he's got to hustle up to the front office and make it through a checkpoint and then make his way back to the
boiler. So there's --

DR. CANONICO: That falls within a cement block wall. I got involved in a small explosion up in Kentucky where they had a small little propane tank blow up, and it blew all the walls down. I would move my office.

MR. BONDI: Yeah. I can ask, at least.

So yeah, he's on the move throughout the night, so he's -- in fact, he's got a GPS locator on his phone built in, so if he were to actually -- if something were to happen where he was, you know, unable to access the phone or something medical happened, if it sits -- I think it's either 45 minutes to an hour, it will actually notify his supervisor who will have to make contact with him or come on-site.

So -- and also, if he leaves the grounds within the GPS accuracy of like 30 feet, it will notify the supervisor as well.

So he's always on the go. And, of course, he has to vouch for that percentage of checkpoints. So again, we're running 95 to 100 on the boilers, which is what we really look for.

CHAIRMAN MORELOCK: Other comments?
MR. BAUGHMAN: Yes. Just looking over the drawings, I noticed on the one drawing, it says (as read): This unit will not fit in the space allotted in the boiler room for the DA. I take it that's been addressed?

MR. BONDI: Yeah.

MR. BAUGHMAN: Good enough. I just -- the only drawing I've got shows it won't fit, just not -- and as of August 24th, hold on the DA until notified.

MR. BONDI: Yeah. Those are construction drawings. The as-builts are different. I don't even have access to the as-builts. That's what we had available to us. I can vouch that it fits, yeah.

MR. BAUGHMAN: Okay. So as far as the final layout of the boiler room itself, the DA is in the room with the boilers?

MR. BONDI: Yes.

MR. BAUGHMAN: Is there any monitoring of the DA being done?

MR. BONDI: Yeah. As you can see -- well, the graphic is probably the quickest representation. But you can see the points that are actually monitored on the DA.
MR. BAUGHMAN: Uh-huh. And so the criteria on that DA for the equipment listing is in here also as far as the set pressures of the relief valves and so forth, and . . .

MR. HERTTER: It should be.

MR. BAUGHMAN: Okay. Having the operating criteria is great, but always matching it up to the design criteria; which, I know everybody does a competent job, but just kind of little things we look at.

There again, it gets back -- and that's okay. It gets back to having a listing of the equipment itself of what's boiler and boiler room equipment, boilers, DAs, and so forth.

MR. HERTTER: Okay.

CHAIRMAN MORELOCK: Any other comments?

Okay. I've just got some editorials.

Your manual doesn't have page numbers. You may want to add those.

The title of your manual is "Boiler Bearings Manual," and up until this year, that probably wouldn't have been an issue, but now we have multiple variances you can come to the State
for. So you might want to make it the Boiler
Attendant Variance Manual, because we do have
other variances available to us as of July of this
year.

We talked about the data sheets on
the boilers, so we've addressed that.

I didn't see in the cover letter or
any of the documents where it states specifically
who is responsible for implementing this system
manual and keeping it current and all that. Is
that --

MR. BONDI: Be myself.

CHAIRMAN MORELOCK: Okay. So we
just need to make sure that's stated clearly in
the manual.

And I know that your remote
station, basically you've got remote devices where
they could be anywhere in the plant to respond to
an alarm. So would there ever be an instance
where that remote monitor could not respond to
that alarm?

And the reason I say that is: In
most situations, if he's trying to respond to the
boiler attendant or boiler operator, what is he
supposed to do if he can't contact that boiler
attendant or boiler operator? Is there an
emergency call list, or what -- what's the next
step if, for some reason -- whether he's using his
handheld device or he's at the remote station
specifically, what is his procedure if he cannot
contact the boiler attendant, the boiler operator?

MR. HERTTER: He would go down this
organizational chart and call the next person.

CHAIRMAN MORELOCK: Okay. So your
organizational chart is your emergency call list?

MR. HERTTER: Yes.

CHAIRMAN MORELOCK: Okay. So you
may want to state that in the manual.

MR. HERTTER: Okay.

CHAIRMAN MORELOCK: Let's see. We
talked about the 5 minutes. I was like Eugene; I
had concerns about that.

It states in your checklist that
Shane Wills is responsible for the training. Is
that correct?

MR. BONDI: Yeah, basically the
training that you have documented here, which is
our contractor safety guidelines. It's a pretty
involved program.

CHAIRMAN MORELOCK: I didn't see
him on your organizational chart.

    MR. BONDI: In the case of an

    emergency, he's our EHS engineer, so he really

doesn't play much of a role with the boilers, not

    that he wouldn't be considered.

    CHAIRMAN MORELOCK: Well, I mean,

    if you're going to label him as your training

    person, you probably want to show how he fits into

    your organization.

    Where does this manual state how

    your tests are performed in the boiler?

    MR. HERTTER: There is a listing of

    the test points.

    Okay. Near the end of Section 4,

    page before last, it goes over the boiler checks

    and the intervals.

    CHAIRMAN MORELOCK: Okay. At the

    end of my Section 4 is the contractor safety

    program.

    MR. ROBINSON: Are you talking

    about the weekly intervals?

    MR. HERTTER: Yes.

    CHAIRMAN MORELOCK: Second-to-last?

    MR. HERTTER: When I get the page

    numbers, it will be easier.
CHAIRMAN MORELOCK: It would be helpful.

Oh, okay. So here it is. And again, just make your manual easy to find stuff. Font size could be important, headings, and stuff like that, too. So like I said, it's editorial.

Okay. Now, I know these guys are -- they've got handheld devices and all that, but in the remote station, do you have a placard anywhere that just kind of gives them a reminder of what they need to do in the case of an emergency? Or, I mean, that's one of the things we put on a checklist. Is there a placard with instructions?

MR. BONDI: First and foremost, the emergency would constitute shutting the boilers down. Again, they'd have the authority. But the E-Stops, beside each E-Stop, we could document our phone -- next -- these two phone numbers. We can expand that further, but . . .

CHAIRMAN MORELOCK: If you've got one of these security guards, and he's dealing with who knows what, and he gets a boiler alarm, it would be handy if he could just have something
to glance at to kind of know -- to keep him on
track to follow through with the proper steps to
put the boiler in a safe situation.

MR. HERTTER: And there's a picture
at the end of Tab 5 that shows the placard at the
E-Stop. But are you asking for one at the
manual --

CHAIRMAN MORELOCK: Well, I'm just
saying that would be like for the boiler attendant
operator. But what about the remote personnel
where -- I know -- like I said, I know they're
roving, but at the same time, in the official
location of the remote monitoring station, would
they have just some instructions there as well?

MR. ROBINSON: They're the fastest
person. They're the ones that's going to hear it
first, see it first. That guy out there in the
field, he's going to -- he's in the field. So
you've got some instruction there that says in the
event of an emergency --

CHAIRMAN MORELOCK: Something
short, easy, but just to kind of keep them on
task. So just a thought. Because that's Item 42
in the checklist as well.

MR. BONDI: Sure.
CHAIRMAN MORELOCK: And what is the procedure to restart the boiler?

MR. BONDI: What is the procedure?

Like I said, the monitoring staff, nights and weekends, don't restart the boilers. Only our chief operator or service technician. We call them on-site.

As far as the procedure for that, I don't know if we have that documented in this manual.

CHAIRMAN MORELOCK: Well, it should be in combination with the remote and the boiler attendant operator to work together to restart the boiler. They shouldn't be able to do it independently of each other.

MR. BONDI: Oh, no, no. Yeah. Like I said, the nights and weekends, they have no authority to restart anything.

CHAIRMAN MORELOCK: You might want to write out what that looks like, because when Deputy Inspector Jackson comes, he's going to want to see that.

MR. BONDI: Sure.

CHAIRMAN MORELOCK: That's all the comments I have.
Any other comments?

MR. BAUGHMAN: Yes, sir. Unless I'm just missing something totally in here, I really don't see the procedures at all.

And for me, I don't know how we can proceed without having procedures. We've got something that's a very incomplete document, in my mind. I'm just kind of calling it out as it is.

The G4S personnel are doing more than just the boiler monitoring. They're doing quite a few other tasks that are asked for in this job description. And in this whole thing, it's just -- it really isn't spelled out to where somebody would be able to do it in a very competent manner, both for us to evaluate -- or for myself to evaluate -- but for somebody to implement also.

So I didn't know if I was missing that in the manual, but I didn't really see the procedure spelled out as far as -- I see the checks that you had spoke about in the back -- the boiler checks and the intervals 20 minutes daily and so forth -- but there's still no checks and balances of how the system operates, how it is verified through the operating personnel. So I --
I'm a little bit concerned with that.

CHAIRMAN MORELOCK: There's a lot of good data in your manual. But, you know, you're operating it, so you know it. But you've got to help us, that's never seen it, to just see how it logically -- how all these people work together to make it run.

I mean, you've got the remote station, you've got their normal duties, their remote monitoring duties, emergency duties; the boiler attendant operator, their daily duties and all that.

And so it's in here, but you really have to go digging for it. And if you can just leave the data in here but just put some pages in there -- again, just basic one- or two-page procedures on what that looks like -- that would certainly help us that's reviewing the manual, but it's also going to benefit the people who are going to use the manual as well, so . . .

I mean, the content of the manual is fine. It's just, like I said, no page numbers, headings are kind of hard to find. It took a lot to go through the manual to get all the information out of it, so . . .
MR. BONDI: Okay. We can elaborate. I don't disagree that the 20-minute checks are, of course, the most important. That's when the operator -- the night weekend operator, that's all he's doing. And I can understand elaborating on that a little bit more. I mean, when I look at it, just considering temperatures and pressure, at what point do you -- you know, you shut it down or make a phone call?

So that's understood. We can make those changes.

CHAIRMAN MORELOCK: Okay. All right.

Any comments from the audience?

Yes, Mr. Jackson?

MR. JACKSON: Did I understand them to say, in answer to your question, that everybody on the org chart is on the emergency call list?

CHAIRMAN MORELOCK: That's what I understood to be said, yes.

MR. JACKSON: And they'll all receive training on boilers and the operation, right?

MR. HERTTER: Yes.

CHAIRMAN MORELOCK: That's what it
MR. JACKSON: Interesting. Okay.

CHAIRMAN MORELOCK: Any other questions?

MS. EWELL: Are there any conflicts?

CHAIRMAN MORELOCK: Thank you. Any conflicts of interest on this item?

Okay. Good. Thanks for keeping us honest on that.

MR. ROBINSON: Make an addition of a boiler log as far as the checks that you do, a log so when Mr. Jackson arrives to do his audit, you'll have a visual presentation of who's been doing the testing.

MR. BONDI: Yeah. In addition to the electronic log, there is actually a -- they keep a notebook -- a spreadsheet that I've created that may have well been part of this --

MR. ROBINSON: Can you include that as a log and a manual?

MR. BONDI: We can, yes.

CHAIRMAN MORELOCK: You don't have to put the whole thing, just an example of it.
Anything else? Okay. Do I have a motion?

DR. CANONICO: I'll make a motion.

CHAIRMAN MORELOCK: You make a motion to approve contingent upon a site inspection by Deputy Inspector Jackson?

DR. CANONICO: Well, I wasn't quite going that far.

CHAIRMAN MORELOCK: Okay. So what's your motion?

DR. CANONICO: I'm a little concerned that -- from what I've heard that we really don't have a manual here who covers -- that covers what we want covered. And they're going to fix it up. The question in my mind is, do we approve it and hope they fix it up, or do we reject it and have them come back next time with the manual we want to see? So --

CHAIRMAN MORELOCK: It's your motion.

DR. CANONICO: My motion is to not approve.

CHAIRMAN MORELOCK: Okay. So I have a motion to not approve. Do I have a second?

DR. CANONICO: Have to carry that
MR. BAUGHMAN: Well, can we discuss that motion at all, or do we second it and then discuss?

DR. CANONICO: You have to second it and then discuss it.

CHAIRMAN MORELOCK: Second it, and then you can vote it up or down.

MR. BAUGHMAN: I'll second that motion.

CHAIRMAN MORELOCK: Okay.

DR. CANONICO: You can't vote against it then.

MR. BAUGHMAN: Well, we'll discuss it. How's that?

DR. CANONICO: Okay.

CHAIRMAN MORELOCK: So now we need to discuss your motion. So are there any comments about voting this down?

MR. BAUGHMAN: Well, my discussion is -- in bringing this up is that we are putting the cart before the horse just a bit, and we're making -- we have talked about making an approval without having a firm document that's really in the manner of what this board's been charged to
do. Even though a lot of the information in here is good, it doesn't give myself personally enough to evaluate and to honestly make a competent decision to say yes, this is -- this is good.

So I feel that the resubmittal of the manual in the form that it needs to be for evaluation would be prudent in this particular case.

So that's the amount of discussion I've got to bring to it.

CHAIRMAN MORELOCK: Any other discussion?

MR. HERTTER: I mean, I'd just like to say: I can get this corrected within the week. Really, the spirit of the variance is already in place. I mean, all the procedures have been implemented. It's been running this way for a year and a half, as far as the setup. I mean, obviously they can't go with the four-hour intervals. But the setup is in place.

So it's not been -- it's not been an issue, and I think I can get this all corrected within days. It's mostly a matter of formatting. I'd hate to go another five months.

CHAIRMAN MORELOCK: It wouldn't be
five months. It would be three.

    DR. CANONICO: Three.

CHAIRMAN MORELOCK: The next

meeting will be the first week in March.

    MR. ROBINSON: How does that fall

within your needs?

    MR. BONDI: It's a challenge to

push out any further, I mean, considering we're

ramping up production and we've got several other

processes that are running 24/7 that these

gentlemen monitor. We've been doing it thus far.

    But again, you know, relying on the

Shelby County licensure also, you know, their

capabilities, our chief operator, intent to hire

another one, I think, kind of supports that we've

grown successfully, we've passed inspection with

flying colors.

    Dallas Ward is our inspector. He

was quite impressed with what we had and what

we've been doing. We've got an A-1 operator.

    He's a great trainer. He's got 30-plus years'

experience.

    I don't think there's anything in

here other than, you know, sort of breaking it

down to details, documenting the training that
they're receiving from our chief operator. Like I said, the framework is here. I think if we could break it down into the details and, you know, document the training and have your inspector lay hands on it, lay eyes on it on-site, I think it would just further support what we've already accomplished at our facility.

CHAIRMAN MORELOCK: I don't think the -- I don't think your operators are in question. That's fine. What's in question is the fact that we know you can operate the boiler safely. You're doing that successfully today on the 20-minute rule.

MR. BONDI: Sure.

CHAIRMAN MORELOCK: What's in question is: Does your manual set forth a process to get a variance from Rule 22 to let you operate in a different manner? And that's where the struggle is.

So yeah, I mean, your personnel and the training and all that is fine. It's just we've not seen clear procedures, we've -- I mean, we've seen -- you know, there's good information in here, but it needs to be clarified and so . . .

Any other comments?
MR. ROBINSON: Mr. Chairman?

CHAIRMAN MORELOCK: Yes.

MR. ROBINSON: Is the board at liberty to allow revision to the manual and submit it electronically back to the members for review?

CHAIRMAN MORELOCK: Not according to Open Meetings Act, no. It has to be done in a public meeting.

Is that correct, Sydnée?

MS. EWELL: Yes.

CHAIRMAN MORELOCK: We can't approve anything outside of this public forum.

Yes, Dr. Canonico?

DR. CANONICO: We approve it with the contingency that Sam, --

MR. ROBINSON: Mr. Jackson.

DR. CANONICO: -- Mr. Jackson agree that it is proper.

CHAIRMAN MORELOCK: Well, that was my first motion that you shot down.

DR. CANONICO: No, that wasn't your motion. You asked for a motion.

CHAIRMAN MORELOCK: That was the words I was putting in your mouth.

DR. CANONICO: Is that what you
were trying to do?

I wouldn't have a problem with that.

MR. ROBINSON: Yes, ma'am?

DR. CANONICO: What I have a problem with is what they have.

MS. JEFFERSON: Could it be approved contingent to another review by you-all?

CHAIRMAN MORELOCK: Well, yes, but that would be in March.

MS. JEFFERSON: Well, not so much in March, but approved here today contingent with you-all reviewing --

CHAIRMAN MORELOCK: Oh, yeah, that's what we typically do anyway.

DR. CANONICO: We've done that in the past.

MS. JEFFERSON: Not -- not at the meeting in March.

CHAIRMAN MORELOCK: Right. I mean, we could review this manual contingent on the changes that we've discussed, and upon successful site visit by Deputy Inspector Jackson, if he gets a cleaned up manual with all of our comments and he reviews that and he goes out and does a site
visit and everything lines up, then the approval
that we would make today would stand.

MS. JEFFERSON: Uh-huh.

CHAIRMAN MORELOCK: So yes, we
could do that.

MS. JEFFERSON: Okay. Now, would
that responsibility be on Sam and Mr. -- well,
Neil Jackson --

CHAIRMAN MORELOCK: Yes.

MS. JEFFERSON: -- to review that
to ensure that everything is corrected outside of
you-all?

CHAIRMAN MORELOCK: Yes.

MS. JEFFERSON: You-all wouldn't
have any --

CHAIRMAN MORELOCK: No.

MS. JEFFERSON: Okay.

CHAIRMAN MORELOCK: Because we do
that on all these variances is that there's always
comments, they always have to clean up the manual
one more time, and then we have a contingent
approval that once Chief Chapman or Deputy
Inspector Jackson reviews it, and all those are --
all those comments and everything are met, then
they have an approved variance.
Dr. Canonico?

DR. CANONICO: I will withdraw my motion.

CHAIRMAN MORELOCK: Okay.

DR. CANONICO: Do you second to withdraw?

MR. BAUGHMAN: I second to withdraw.

MR. ROBINSON: I'll make the motion to approve, based on resubmittal of the manual to the chief -- to the interim chief, Sam Chapman -- assistant chief --

MR. CHAPMAN: Thank you.

MR. ROBINSON: -- and, naturally, a successful audit by Mr. Jackson.

CHAIRMAN MORELOCK: Okay.

DR. CANONICO: Second.

CHAIRMAN MORELOCK: Okay. I've got a second on that.

All right. Any discussion about that motion?

MR. JACKSON: Just a comment.

CHAIRMAN MORELOCK: Okay.

MR. JACKSON: When I make my inspection, either acceptance, or in the
particular case there's not necessarily a
rejection but there's an error in the program, I
know -- I list it in a letter that I send to the
office that either it was acceptable or
unacceptable based on these certain things.

So there's always a letter that
goes to the department of my inspection.

CHAIRMAN MORELOCK: Okay. I think
that's proper.

Any other comments?

MS. JEFFERSON: And also, just for
you-all's clarification and the court reporter
here transcribes -- well, the transcriptionist,
I'll say -- is transcribing the minutes. So
everything that the board members mentioned today
will be, verbatim, in that document. So you have
access to that. All you have to do is go to the
website and take a look at everything that was
requested to make sure that you're including
everything, because as Mr. Jackson said, if
anything is omitted, then he will be submitting
that information to us as a form of rejection. So
if you want to ensure that everything is taken
care of, please review those meeting minutes on
our website.
MR. BONDI: Yes.

CHAIRMAN MORELOCK: Okay. Any other comments?

I'm going to call for the question.

All in favor say, "Aye."

IN UNISON: Aye.

CHAIRMAN MORELOCK: Opposed?

Abstentions, not voting?

Gentlemen, you have a contingently-approved variance.

MR. HERTTER: Thank you.

MR. BONDI: Thank you.

CHAIRMAN MORELOCK: Again, you're welcome to stay, you're welcome to excuse yourself if you need to.

We'll move on to the next item, which is Item 14-15, which is Jack Daniel Distillery request a variance on two wood-fired boilers.

MR. TIPPS: Good morning.

CHAIRMAN MORELOCK: Good morning.

Introduce yourselves.

MR. TIPPS: I'm Mike Tipps, manager of distillery operations.

MR. HORTON: David Horton, lead
boiler, by-products operator.

MR. TIPPS: We're here to -- well, I guess we've got a couple, but I'll request, first, a variance for our wood-fired boilers, Boilers No. 1 and 2. Boiler No. 1 is a 55,000-pound Keeler wood-fired boiler. Boiler No. 2 is an 80,000-pound Keeler wood-fired boiler also. They're originally installed as quad-fired boilers, and there's no -- if you do a lot of things, you don't do one thing real well, so we converted them to wood-fired boilers, wood-fired only.

They're controlled through a control room. Our operators are actually our boiler room controllers that is remotely located 100 yards or so from the actual boiler building itself. It's controlled through a DCS system. It was originally an APAC system. It's still APAC's equipment with the front end, or the HMI Siemens PCS 7, over APAC's.

So our operators, we have two operators on a shift. One is outside doing things around boiler by-products, that sort of thing. And the other operator is in the control -- in that control room. It's manned 24/7. We run 365
days a year up there, so that control room is always manned.

So that's the situation we have with the wood-fired boilers.

CHAIRMAN MORELOCK: Do we have any conflicts of interest on this item?

All right. Hearing none, I'll open the floor for discussion.

Yes, Dr. Canonico?

DR. CANONICO: Does "liking" indicate a conflict of interest?

CHAIRMAN MORELOCK: No.

DR. CANONICO: Okay.

CHAIRMAN MORELOCK: Being a procurer of a product does not constitute a conflict of interest.

DR. CANONICO: Okay. On page 1, you talked about trained boiler operators in the second paragraph. And I must admit that the two books I've looked at, you've come forth with one of the best training programs, internal training programs, I've seen to date. And I've been here for a number of years. So I was very impressed with that.

MR. TIPPS: Thank you, sir.
DR. CANONICO: The other problem I had, at the bottom of the page, last sentence, "I described in Section C and D."

And I can't find C and D. In fact, in your...


DR. CANONICO: You have Appendix A and Appendix B in your Table of Contents, but I can't find C and D.

Those are the Cs. Okay.

CHAIRMAN MORELOCK: Yeah.

DR. CANONICO: Section C -- okay.

I guess that takes care of that.

Let's see. What else did I have?

CHAIRMAN MORELOCK: Does that take care of it?

Any other comments?

MR. ROBINSON: Minor comment, editorial. I know you guys are at 280 Lynchburg Highway. And I guess this is directed towards the State, assistant chief. The boilers are really at 590. I'm inclined, when I pick up the manual, the first page I see is going to be the address at which I'm at. And the only reason why I say that: In the event of an emergency, if someone picks it
up, the first address they see is going to be the
address where they should be going to.

    Should that not be corrected?

    That's the question.

    Right now, it shows 280 Lynchburg
Highway. I would like to see it show the 590
location.

    MR. TIPPS: We will make the
correction to the correct address regardless of
which one of these actually should be on that
Lynchburg Highway. There's -- there are multiple
entrances to Jack Daniel, and we could be quoting
two different entrances that end up at the same
place. But we will have one correct --

    MR. ROBINSON: It's Mike, right?

    MR. TIPPS: Yes, sir.

    MR. ROBINSON: You're the first
wood-burning boiler that has come before the board
during my tenure. And just to let you know: In
my opinion, it fell under heavy scrutiny. And
some of the questions, you'll understand why.

    A wood burner is going to contain
so much fuel. And my real -- first question is:
How much or how long is this thing going to burn
once you shut the boiler down?
MR. TIPPS: David can probably answer -- not very long because we shut off the air at the same time, and they smother themselves out rather quickly. I don't have an exact minutes for that.

David, you may have a better idea.

MR. HORTON: Yeah. The wood screws shut off and all the dampers close, so you limit -- cut your fuel off, what's left on the grates burning, your air goes off, and it just kind of smolders there.

MR. ROBINSON: That combustion chamber is pretty tight? There's no leakage, nothing coming out of it?

MR. TIPPS: Of course, there is some leakage on a wood-fired boiler, but it's not -- but it's a minimal amount. And we don't maintain a large amount of wood on the grates. It's continually burning, continually fed in.

MR. ROBINSON: So in reality, we do have leaks, so we want to get oxygen into the chamber, so --

MR. HORTON: Some. Some. We maintain them as tight as possible.

MR. ROBINSON: We want to get some,
but we really can't quantify it?

MR. HORTON: It's not enough to sustain making steam.

MR. ROBINSON: If you open a door, it's going to burn?

MR. HORTON: Right.

MR. ROBINSON: So if the door opens, either by force or some unsuspecting person, it's going to ignite again?

MR. HORTON: It's going to burn, but it's not going to burn like you're having undergrate air coming up through it, you know. You're pulling air across it. It's not going to be the undergrate air that's coming up through the wood that's really going to sustain and make that fire hot enough to make the steam. You know, you cut the air dampers off, especially the undergrate, it's going to slow it down enough that it . . .

MR. ROBINSON: Okay. Question: Your control room is really elaborate, first of all.

MR. HORTON: Yes, it is.

MR. ROBINSON: Do you also control the air fuel mixture from that central point?
MR. HORTON: Yes.

MR. TIPPS: Yes.

MR. HORTON: You make all your adjustments from there. You're getting all the information and data from your screens.

MR. ROBINSON: So how -- how are you -- what data are you taking to make that assumption?

MR. HORTON: We have wood moisture going in. You know what your wood moisture is. You're looking -- we've got a camera on the furnace itself. So you can actually see the fire, how you're doing, your airflow through the grates, through the fire. So you're going to know how it's burning, if you're getting behind on steam pressure or anything, if you need to adjust, add a little bit of air, take a little bit of air out.

MR. ROBINSON: How do you control the airflow?

MR. HORTON: With the bias on your dampers. You set your pressure on your fans, your FD fan, and then you'll put a bias on your dampers where you can have those open a little bit more or stay closed a little bit more than what it's calling for. But it's automated. I mean, it's --
MR. ROBINSON: It's automatic?

MR. HORTON: Yes. It's automatically doing it, and then you make the adjustments according to the information you're getting back, you know. If you're going positive too much, you're going to put a little more draft in it. You've got people also going out, radio contact. You have a rover going out that goes in the boiler and looks and checks things out and kind of lets you know, "Hey, you've got a little -- need a little more draft. Got some sparks coming around the doors."

MR. ROBINSON: You ever get a fire upstream of the fuel feed?

MR. HORTON: We've had some fires around our wood conveyors where you might get some sparks and get some dust. We try to wash those down daily.

MR. ROBINSON: How did you guys react to that?

MR. HORTON: Went over there and washed it down, put it out.

MR. TIPPS: Put out the fire.

MR. ROBINSON: You got a camera pointing to it?
MR. HORTON: Yes.

MR. TIPPS: Yes.

MR. HORTON: We've got a camera going right across our wood feed so you can see --

MR. ROBINSON: So you can detect anything that sparks?

MR. HORTON: You can see it, yes.

MR. ROBINSON: What about sensors, temperature sensors?

MR. HORTON: In the building or . . .

MR. ROBINSON: Upstream of the fuel feed auger.

MR. HORTON: No temperature sensor. We have -- you know, of course, we've got the backdraft dampers that as the wood goes in, it's going to close, eliminate those sparks from going up into the wood hopper.

MR. ROBINSON: When you did have your fire, what's the worst case?

MR. HORTON: We lost a wood screw motor. So we -- you know, we've lost one wood screw, and had to call maintenance in and re-wire it and . . .

MR. ROBINSON: How long did that
one burn?

MR. HORTON: We kept it going. We had three wood screws feeding it, so we kept two going. The one that was off, we just had to back down our process a little bit. We couldn't make the steam flow that we needed, so we just had them back down, and then got maintenance in and rewired.

MR. ROBINSON: It burned pretty good, in other words?

MR. TIPPS: It burned some wires.

MR. ROBINSON: Oh, some wires?

Okay.

MR. HORTON: Oh, yeah, just burned some wires. It didn't burn --

CHAIRMAN MORELOCK: It was an electrical failure, not mechanical failure.

MR. HORTON: Right. We do a really good job, sanitation-wise, to try to eliminate those -- those kind of things where you've got a lot of wood dust collected.

MR. ROBINSON: You were doing that during the 20-minute rule, right, in that burn?

When that -- when the wires were overheated and when the motor burned, it was the 20-minute rule,
right?

MR. HORTON: I assume we were under that rule then.

But as far as, you know, would you know it at the central control room now? You would know it really quick.

MR. ROBINSON: Did you have the same setup?

MR. HORTON: Yes, we had the central control cameras.

MR. ROBINSON: What happens to the pumps when you lose power?

MR. HORTON: They go off.

MR. ROBINSON: Do you have generators for that section? I seen one in the other section, but not this one.

MR. HORTON: No.

MR. ROBINSON: So nothing to continue to pour cold water or water into the vessel?

MR. HORTON: No.

MR. TIPPS: With complete -- with a complete power failure --

MR. HORTON: Everything goes off.

MR. ROBINSON: Everything shuts
off, all the dampers?

MR. HORTON: Fail-closed.

MR. TIPPS: Dampers fail-closed.

MR. ROBINSON: No more. Go ahead.

MR. BAUGHMAN: Yes, sir. Where is the emergency boiler shutoff switch actually tied into? What components does it tie into?

MR. HORTON: Kills your wood screws, and it shuts your dampers.

MR. BAUGHMAN: Okay. This monitoring system is not only tied in with the wood boilers, but it's also tied in with the gas boilers; is that correct?

MR. HORTON: Part of it, yes. We have two gas boilers, and one of them is on that same Siemens, and then -- on those monitoring screens; and then the other one's on a touch screen. It's a little bit different, but we're in the process of putting it on the same type as you see there.

MR. BAUGHMAN: Okay. Well, in the manual, it says, in fact, the system has been engineered to control monitor all of the by-product area processes, including two additional gas boilers, and so forth. So that's
why I was wondering if it was -- the way it states
is, it's also got the gas boilers tied in on this
also.

        MR. HORTON: Yes.

        MR. BAUGHMAN: Does the -- do the
boilers both have to operate to pull your load, or
are you using one as a standby or hot lay-up or
both boilers stay on --

        MR. HORTON: In our current
production, we run both.

        MR. BAUGHMAN: Okay. So downtime
is critical in your operation to keep the process
up and cooking?

        MR. HORTON: Yes.

        MR. TIPPS: Yes.

        MR. BAUGHMAN: Okay. In the
operations manual, it gives that responsibility of
alarms, and the qualification or quantification of
that alarm to the by-products boiler operator,
boiler monitor personnel. Not all alarms are
considered to be emergency situations. It gives
minor alarms, no further action, operator will
acknowledge and clear the alarm; alarms that
warrant action, operator will acknowledge and so
forth; and then alarms that warrant action. But I
don't see any differentiation -- in other words, it's up to the operator to make that determination what's minor, what's major.

MR. HORTON: Right. You'll get some alarm warnings. You'll get a warning and -- you know, high-furnace warning before you get a high-furnace pressure, you know. And a lot of those, if you've got some real dusty wood, real dry wood, you might get a little high-furnace, so it clears itself. I mean, it's not anything you really need to do.

MR. BAUGHMAN: I understand.

MR. HORTON: But, you know, if you get an alarm that warrants some action that's calling maintenance, such as a wire burnt, a motor's down, then, you know, our operators know -- they can distinguish between alarms that warrant action and ones that don't, that's going to take care of theirself.

MR. BAUGHMAN: Uh-huh.

(As read): This action is left to the discretion of the by-products boiler operator. He has been trained to make judgment calls and solve problems under pressure.

We've got a nuisance alarm. Do you
MR. TIPPS: Yes.

MR. BAUGHMAN: What kind?

MR. HORTON: You'll have, you know, alarms that -- where if you're right on the bubble of either -- whatever it is; level or SBR, anything -- that it just keeps going under, coming back in, going under, coming back in. You know, things like that.

MR. BAUGHMAN: Which is critical.

Most boilers melt instead of blowing up, so the low waters are critical. What you've described is a nuisance low-water alarm. In the boiler industry, we all deal with nuisance alarms. My problem is, is knowing that operation is critical to keep the product flowing, and if we've got a nuisance alarm and an operator makes a judgment decision, I know that's a nuisance alarm. It's been going off on low-water periodically for months -- we know that -- high load, DA, whatever the problem may be, and he resets it. And it goes off again, and resets it.

What I don't want to see is something from a judgmental standpoint that goes from being a nuisance alarm judgment call -- the
last thing we want to do is see you guys on the
news in a different light. So from that
standpoint, that's what we charge for.

And I've got somewhat of an issue
inasmuch as -- this is laid out extremely well,
and I like it in some respects. But from the
respect of not itemizing what particularly gets
judged in this alarm sequence and how that gets
acknowledged -- because an alarm is an alarm, and,
yeah, maybe you're in a different installation --
wood-fired and what have you -- but in our
discussion just now, we also know that there's
other alarms that come up and how those get
addressed.

And I just want to bring it up from
a concern standpoint so that there may be further
definition for an operator. It's totally, this
action is left to the discretion of the boiler
operator. We're all human beings. And that
judgment call -- I like things in black and white.
I don't particularly like things that are judgment
calls. And so I would like to see things
itemized.

That's my own two cents' worth on
it.
MR. HORTON: We have a very elaborate alarm system. There's all kinds of alarms, you know. I guess it would help us if we knew more specific what area, you know, we -- we've got a bunch of alarms, high amps on every motor, you know. Just continuous. Continuous.

MR. TIPPS: On something like the low water, he's getting an alarm, which, now, we're finding out some industries call them different things. It would be more like a warning. It's getting slightly low, and his judgment is, "Okay, do I need to cut on another pump, feedwater pump?"

MR. HORTON: If it's continuous, do I need to raise my drum a half inch?

MR. TIPPS: When he gets that low-water cutoff, it's cutting off and he can't do anything about it.

MR. HORTON: Right.

MR. BAUGHMAN: But we all know, too -- we've all been in the industry a long time. You guys have operated a long time -- to know that we also have instances where there are nuisance alarms that are more than just warnings, but we know we've got a device, you know. When that
device comes in next week, we'll replace it, we'll
deshut down then. We can't really shut down right
now because production is high. We don't have
that availability there.

MR. TIPPS: That is not our company
policy, it's not our personal policy. If we have
something like that, that boiler goes down, we've
got the two gas-fired boilers we'll discuss in a
minute that are our backup boilers.

MR. BAUGHMAN: Super. I like to
hear that.

MR. HORTON: Yeah, even though it
said there the boiler -- boiler operator's
discretion to make the calls and call maintenance
or call Mike or myself, I mean, we're there also.
I mean, we're -- it's not like we're not around
the operations. We're in there every day. We
know what kind of alarms are going off, if there
is a problem. And like Mike said, we tend to get
them corrected --

MR. BAUGHMAN: Well, and here's the
other thing, too, is: It's still an interpretive
judgment call, and one operator's interpretation
may be different than another. And the only way
to have any consistency is to have something in
black and white, what actually mandates a particular shutdown.

And I guess I'm just a little -- I've got problems with the wording, that it's left into the discretion. Okay?

MR. TIPPS: I understand. We can correct that.

CHAIRMAN MORELOCK: Any other comments?

MS. JEFFERSON: I have a question. Safety, of course, is our number one priority. So in getting back with what Mr. Robinson was talking about in the beginning, I think he was talking about safety, moving to our safety questions. You mentioned that this is unique; the wood-burning or wood-fired boilers are unique to Tennessee. So my question to our inspectors and maybe the board members is: How many of these type of boilers do we currently have in Tennessee? Do you know approximately how many, since this is unique?

MR. ROBINSON: If I were -- take -- take most of your lumber companies, and you'll see a lot of them.

MS. JEFFERSON: Okay. So it's not
so much --

MR. ROBINSON: So relative to

66,000 -- am I correct? 66,000?

MR. CHAPMAN: 66,000.

MR. ROBINSON: -- 66,000 boilers, I think, with what? How many -- fourteen -- 2400 being boilers, I would estimate no more than 10 percent. So 2,000, conservative?

MR. CHAPMAN: Pretty much.

MR. ROBINSON: That's a lot.

MR. CHAPMAN: That's a lot.

CHAIRMAN MORELOCK: Mr. Robinson's comment was more toward the fact that this was the first to come before the board for a variance, not that it's the first wood boiler.

MS. JEFFERSON: Okay.

CHAIRMAN MORELOCK: This is just the first to come before a variance. There's other wood boilers out there on a 20-minute rule now.

MR. ROBINSON: Yes. Every one I've seen in wood-burning environments, they had 20-minute rules, they've got a guy who is right there constantly.

MR. CHAPMAN: Yes.
CHAIRMAN MORELOCK: Any other questions or comments?

MR. ROBINSON: They reminded me of two other questions I had. Naturally, the hard-core safety devices or safety stops, we really need to know what those are because that will help us make a determination as to if the boiler is safe. I'm not questioning your elaborate system. Really, your system is really -- man, you guys have put a lot of effort in design and thought, and I -- it's a beautiful thing.

But I need to know with that -- clear certainty: One of the statements you make in your manual, you said that you could change the parameters, the safety parameters, or you can adjust the low water. You said you can adjust the level indicators to make it --

MR. HORTON: You can -- no, you can adjust your drum level.

MR. ROBINSON: Right.

MR. HORTON: You can say, you know, instead of having it set at zero, I want it at plus 2, --

MR. ROBINSON: And you can --
MR. HORTON: -- try to maintain that plus 2.

MR. ROBINSON: You can do it from the control room?

MR. TIPPS: We can do those settings. We cannot -- they cannot change the low-water cutoff level themselves. That's something operators cannot change. There's certain safety things and certain things that they are locked out of and cannot change.

MR. ROBINSON: Which leads me back into CSD-1 hard-core devices. From that control station, you cannot modify any of those settings?

MR. HORTON: No.

MR. ROBINSON: You cannot override them?

MR. HORTON: No.

CHAIRMAN MORELOCK: You can modify the performance of the boiler, but you cannot bypass the safety.

MR. HORTON: Oh, no. No, no, no. All you can do is adjust your air, your water levels, your . . .

MR. ROBINSON: That's all I have.

CHAIRMAN MORELOCK: Yes, sir?
MR. BAUGHMAN: So in carrying it on to the CSD-1 point, we do have the manual-reset high limits, the manual-reset low waters that are manually reset physically out on the equipment itself?

MR. HORTON: Not at the wood boiler: with the gas boilers.

MR. BAUGHMAN: On the gas boilers.

Okay.

So we don't actually have a control safety -- no CSD-1 that's related to that?

MR. HORTON: Yeah.

MR. BAUGHMAN: So we don't have any manual reset devices, then, on these two 35-year-old Keelers?

MR. TIPPS: That's correct.

MR. BAUGHMAN: Okay. Interesting.

CHAIRMAN MORELOCK: Any other questions or comments?

Yes, Mr. Jackson?

MR. JACKSON: Listening to Dave's questioning on this judgment call, my understanding with the variance is, it's not a judgment call because the remote station is the first contact, not the operator. So where does
this come in at? I guess I'm losing it somewhere.
Where -- what shuts the boiler down? The
operator, or is there a remote station? Is there
somebody located somewhere that's monitoring this
thing, or what?

MR. HORTON: You can shut it down
from our control room.

MR. TIPPS: The remote station
where our -- are manned 24/7. There's somebody
always there.

MR. HORTON: It's in our control
room.

MR. JACKSON: We get all these
alarms. Does every alarm go to the remote
station?

MR. TIPPS: Yes.

MR. JACKSON: So how does he know
which one to shut it down with?

MR. TIPPS: He is seeing everything
on the screen.

MR. HORTON: He's actually
operating the boiler.

MR. TIPPS: He's operating the
boiler.

MR. HORTON: He's not remotely
monitoring -- he's operating the boiler from the remote control room.

MR. JACKSON: He makes the judgment call as to whether to shut it down or not?

MR. HORTON: Yeah.

CHAIRMAN MORELOCK: But he's trained as a boiler operator?

MR. HORTON: He's a boiler operator; he's not a night watchman.

CHAIRMAN MORELOCK: The manual says these guys are all boiler operators.

MR. HORTON: Right. They're all boiler operators.

CHAIRMAN MORELOCK: This is not a security guard running a DCS?

MR. HORTON: No.

CHAIRMAN MORELOCK: This is a boiler operator running the DCS?

MR. HORTON: They have to sit there and monitor what's going on and make all the adjustments on the air. If you've ever burned wood, it's continuously changing --

CHAIRMAN MORELOCK: I mean, that's the way we run our boilers at Eastman. We've got boiler operators on a DCS.
MR. JACKSON: So there's no fault messages that come up. It's just an alarm and the judgment call is made?

MR. HORTON: Fault?

MR. TIPPS: We have two operators on shift. One will be outside doing whatever, and we've got the other gentleman that's related that's controlling -- actually in the control room. So if there's anything going on outside, he's got a fully qualified boiler operator that can be there in a minute if he's not already in the room.

CHAIRMAN MORELOCK: Neil, if it helps you, I mean, the guy sitting in the remote monitoring station could easily hand his chair off to another one and walk right out into the facility and run the boiler because he's a boiler operator. He -- they all have the same level of 18 months of training.

So it's different than what we typically see where you've got a receptionist or a security guard or a maintenance guy at the remote station. These are boiler operators at the remote station.

MR. HORTON: And they are in radio
contact with each other, so if your boiler
operator is out checking something else that
you've got an issue, you can get him to that
boiler building facility to check on anything you
need to get checked on.

MR. ROBINSON: All within 100 yards away?

MR. TIPPS: Yes.

MR. ROBINSON: Par 3.

MR. HORTON: Good par 3.

CHAIRMAN MORELOCK: Any other
questions or comments?

All right. With all that said, do
I have a motion?

DR. CANONICO: So made, to approve.

CHAIRMAN MORELOCK: All right. So
I have a motion to approve, contingent on any
changes to the manual and successful inspection by
the deputy inspector.

DR. CANONICO: And depending upon a
second.

CHAIRMAN MORELOCK: And depending
on a second. That's true.

So do I have a second?

MR. BAUGHMAN: I would second upon
that contingency. And have we agreed on the
contingencies? I've still got -- I still want to
make sure that we've got the judgment taken out as
much as what we can so that there is a black and
white put into the manual, as far as procedure is
concerned.

CHAIRMAN MORELOCK: Well, that's
the comments that are going into the minutes that
these gentlemen will address in their revision of
the manual for Mr. Jackson and Mr. Chapman to
review.

MR. BAUGHMAN: Okay. I second.

CHAIRMAN MORELOCK: Okay. Any
other discussion?

MS. SANDERS: I have a question on
that topic. If we put in more definition around
the alarms that require action, is that acceptable
or -- I guess what I'm -- I'm trying to avoid
laying out all -- every single alarm that we have.
Okay. This -- all these alarms, you know, because
it depends daily. But like low water, okay, yes,
that is a shutdown alarm, you know. So the ones
that require action, if we list out those that are
the most important, would that be acceptable?

MR. JACKSON: I agree with her.
DR. CANONICO: Okay. You've been operating under the 20-minute rule, so you have no experience with this judgment call-type thing?

MR. HORTON: Yes. Everybody there that works on a shift is a boiler operator --

DR. CANONICO: Yes.

MR. HORTON: -- whether they're over here or --

DR. CANONICO: As I said earlier, --

MR. HORTON: -- at the boiler --

DR. CANONICO: -- this is one of the best training programs I've seen.

MR. HORTON: Right. Yes, they've been making these judgment calls on alarms. They make them every day.

MR. TIPPS: Regardless of whether he's in the boiler building or in the control room that's 100 yards away.

CHAIRMAN MORELOCK: But Dr. Canonico, the difference is time. The logistics are the same. They're going to continue to operate, whether it be they check it every 20 minutes or every four hours. All the equipment is still the same. The process is the same. The
only thing that's going to change with this variance is that instead of checking the boiler every 20 minutes, they'll check it every four hours. All the other controls and operations remain the same.

Correct?

MR. HORTON: Correct. We haven't changed anything.

MR. TIPPS: We're not going to change anything.

CHAIRMAN MORELOCK: Does that make sense?

DR. CANONICO: I'm having trouble with this variance. You're going to have an alarm now, and someone's going to make a judgment as opposed to being in there at the boiler and actually seeing what's going on. I mean --

MR. HORTON: We get all the information back to the control room. That's where we're actually controlling the boilers from. And we've got cameras -- cameras in the furnace, cameras on the wood feed system, cameras on the -- in front of the boilers. We're -- all the information, everything that boiler is doing, every -- it's all coming back to that controller,
to that boiler operator.

He's in contact with a rover that is also a boiler operator to where if he gets an alarm that he thinks needs to be checked, he gets on the radio, hollers at the rover to go to the boiler and check out so-and-so. When he gets there, he's a qualified boiler operator. He can go in the building, take care of whatever issue that we're having. We have maintenance on-site, anything like that, that's . . .

We're basically not changing our operation that we've been burning wood for the past --

CHAIRMAN MORELOCK: It's just your rover won't have to go back to the boiler for 20 minutes.

MR. HORTON: We're expanding. It's taking more people. We need some relief.

MR. BAUGHMAN: How long has this system been in place?

MR. HORTON: Since --

MR. TIPPS: The control system? Since '98, this particular control system. Of course, previous to that, there was other control systems for the boilers.
MR. BAUGHMAN: So all -- this monitoring system has already been in place for quite some time?

MR. HORTON: Yes. We've been doing it successfully since '98. It's very good.

MR. BAUGHMAN: But it's been operating under the 20-minute rule even up to today?

MR. HORTON: All that information that -- you know, it's -- we've got everything in there, everything. I think when he comes down and sees it, he'll feel good.

MR. BAUGHMAN: Do you feel the variance increases your level of safety?

MR. HORTON: Yeah. I think it's fine. Those wood boilers that we've been burning for a while now is -- I feel a lot more comfortable around those boilers and in those boilers than I do a small chamber, gas boiler with instantaneous (snapping fingers). You've got to supply the air to make this wood burn. It's not -- you know, it's not (snapping fingers), boom, like a gas.

MR. BAUGHMAN: Sure. I understand.

Well, we've got a 35-year-old piece
of equipment, so that's kind of why I'm
inquisitive about that and -- but knowing that
that system has been in place, that you've been
operating it, I wanted to get your honest opinion
on. Do you feel that it keeps the status quo or
actually increases your level of safety?

MR. HORTON: It's -- definitely
keeps the status quo. I mean, I don't think
there's anything that's going to go on there
because we're not there every 20 minutes that's
going to endanger anybody coming in there every
four hours.

And also, to let you know that
we've got people -- like I said, there's
maintenance that's -- it's not like nobody's going
over to that boiler building, that it's abandoned.
There's people in there constantly. Maintenance
is going in there, checking, doing their job,
greasing, whatever. Our guy's going through.
It's -- you know, somebody is there all the time.

CHAIRMAN MORELOCK: Any other
questions or comments?

With that said, I'll call the
question: All in favor say, "Aye."

MR. BAUGHMAN: Aye.
DR. CANONICO: Aye.

CHAIRMAN MORELOCK: Opposed?

MR. ROBINSON: (Raising hand.)

CHAIRMAN MORELOCK: We've got one opposition. Abstentions, not voting?

Gentlemen, you have a contingent variance.

Okay. Our next item is 14-16; again, Jack Daniel Distillery. And this is for the two gas boilers.

MR. TIPPS: It's pretty much the same type of deal. These gas boilers are probably, what, 100 feet from this central control room, probably -- well, probably a couple hundred feet from this central control room, which -- and they are basically, right now -- hopefully right this minute, we're not burning any gas through those. We're up here, so I don't know absolutely for sure.

But they're basically -- at this production level we're at, they're more like standby boilers. If, for some reason, we have to run everything at the Distillery and the by-products area requiring that much steam, then we'll fire up one of the gas boilers. And
normally it's two wood boilers, and under extreme loads, would be the -- one of the gas boilers would be running.

And that's basically all they -- all they run is just either for standby or for a little extra steam, when required, at the Distillery and what by-products there is.

CHAIRMAN MORELOCK: Okay. Are there any conflicts of interest on this item?

All right. Hearing none, I'll open the floor for discussion.

MR. BAUGHMAN: The boilers are tied in -- the wood-fired and gas-fired boilers are tied in on the same steam manifolds?

MR. TIPPS: Correct.

MR. BAUGHMAN: What are the relief valve settings on the boilers, the gas-fired boilers?

MR. HORTON: Two-hundred and . . .

MR. TIPPS: 220.

MR. HORTON: 220.

MR. BAUGHMAN: So they're set for the maximum pressure that the boilers are rated for?

MR. HORTON: We've got two of them.
One of them is set lower, and the other one is set higher.

MR. TIPPS: Two on each boiler.

MR. BAUGHMAN: Okay. But the maximum -- the relief valve settings --

MR. HORTON: Yeah.

MR. BAUGHMAN: Okay. Do you know what they're set on the wood-fired boilers?

MR. HORTON: The same.

MR. TIPPS: Same.

MR. BAUGHMAN: So the wood-fired boilers are 250 psi boilers; the BMW and Nebraska are 220 psi boilers.

So the BMW is 44 years old? Good old boiler. And the Nebraska, being a '99, were both these boilers original, or were they --

MR. TIPPS: They were both purchased used.

MR. BAUGHMAN: Both purchased used.

Okay.

Any incidences with ENE, either of the boilers?

MR. TIPPS: No.

MR. BAUGHMAN: Okay. How long has the Nebraska been in?
MR. TIPPS: Two years?

MR. HORTON: Yeah.

MR. TIPPS: Two years, I believe.

I don't have the exact date on that.

MR. BAUGHMAN: Okay. So it's relatively new?

MR. TIPPS: Correct.

MR. BAUGHMAN: Okay. As with the other, with the wood-fired, you don't have any information as far as within the DA system, and I always hate to beat -- well, I don't hate to beat it, but DAs -- yeah, DAs can have the same effect as the boiler?

MR. TIPPS: Right.

MR. BAUGHMAN: And somewhere down the road, it will get addressed, we're all here for safety, but making sure that those same checks or the identification's made back to the DA itself.

That's all I've got for right now.

CHAIRMAN MORELOCK: Okay. Any other comments?

MR. ROBINSON: Yes. Description of your electric input going into the two gas-fired boilers, you use 480 volts, and then you also have
the standby generator. I think I saw that in the
diagram.

MR. TIPPS: Right.

MR. ROBINSON: And they go through

the same primary switch gear?

MR. TIPPS: No. Well, primary

switch gear, yes, through the same -- I'm not

sure -- I'm going to describe this. Our standby
generator is actually located down at the

Distillery in the back room there. It feeds panel

at the gas boiler building, but it feeds through

that switch gear down at the Distillery. I think

that's what you're asking. I'm not --

MR. ROBINSON: Right. What I'm

trying to determine: I'm looking at risks, I'm

looking at loss based on if you lose your primary

coming in, --

MR. TIPPS: Our generator --

MR. ROBINSON: -- you've got no way
to get power in through the generator because the

primary switch gear is gone.

MR. TIPPS: No, there is a switch
gear down at the generator that, when power goes

out, the generator automatically comes on and

feeds that gas boiler at No. 8. It's the only
boiler we've got that's fed through the portable generator.

MR. HORTON: We're looking at just keeping enough heat to keep things from freezing and --

MR. ROBINSON: So 15 -- yeah, 15 goes down, but 8 continues?

MR. HORTON: Right.

MR. TIPPS: Correct. It also feeds the air compressors to run -- feeds -- and I think you just checked that out in the last month or so?

MR. HORTON: Yeah.

MR. ROBINSON: That helps reduce your exposure?

MR. HORTON: Yes.

MR. TIPPS: Normally before we get into winter, when you normally have power outages and stuff down in rural area in spring, at least once a year, we go through with the generator, air compressors, and everything, starting it up from cold.

MR. ROBINSON: Change the diesel fuel, things like that, filters?

MR. HORTON: Yes.

MR. TIPPS: Our diesel tank that we
use to run that boiler on, we're constantly running through it because our big loaders to run -- to move the wood with for our wood-fired boiler, we actually feed it out of that so that diesel is not sitting there for three years at a time.

MR. ROBINSON: You've got two org charts -- any reason for that? -- in the manual.

Two organizational charts. Forgive me.

MR. TIPPS: Are they different?

MR. ROBINSON: They didn't look different.

CHAIRMAN MORELOCK: One's got names and one's got job titles.

MS. SANDERS: If the people change, if, you know, Mike retires and someone takes his place, then you only have to change out one sheet in the manual so we don't have to reprint the whole thing.

MR. ROBINSON: Very well. That's very good.

CHAIRMAN MORELOCK: Yeah, both manuals are that way.

MR. ROBINSON: Okay. The alarm system with auto shutdown. That's audio, right?
MR. TIPPS: That's what?

MR. ROBINSON: When a boiler goes down, you have an alarm annunciation panel that goes off?

MR. TIPPS: Yes.

MR. ROBINSON: Monitoring system, when you conduct a test, do you record any of the checks on the check log?

MR. HORTON: Yes.

MR. ROBINSON: And you log testing --

MR. HORTON: Cut off, yes.

MR. ROBINSON: And that's in your log sheet?

MR. HORTON: I don't know if it's in this one, but we have it in our control room.

MR. ROBINSON: No, it's not.

MR. HORTON: I didn't think I saw it, but -- but we can put one in.

MR. ROBINSON: Would you, please?

Really very nice manuals on both parts.

Thank you. That's all I have.

MR. BAUGHMAN: Two different control systems as far as the firing control, fire IE-110 and the Honeywell 7800. I didn't ask the
question on the wood-fired boilers, but on these
gas-fired, how often is the low-water cutoff being
positively checked?

MR. HORTON: Positively shutting it
off?

MR. BAUGHMAN: How often is the
low-water cutoff having a --

MR. HORTON: We -- we check the
low-water cutoff every day it runs.

MR. BAUGHMAN: Okay. The gas-fired
boilers?

MR. HORTON: Gas-fired boilers with
the --

MR. BAUGHMAN: Are you going
through a shunt?

MR. HORTON: Yes. The --

MR. BAUGHMAN: Okay. So actually, you're just testing the alarm --

MR. HORTON: Testing the alarm.

MR. BAUGHMAN: -- but not testing
the actual --

MR. HORTON: Yeah. We try to do
that when we're shutting down.

MR. BAUGHMAN: So what I'm
understanding is: You're checking the alarm
circuitry, but it's not actually shutting the burner off?

MR. HORTON: Right.

MR. BAUGHMAN: Okay. That's not a true, positive check for low-water cutoff, as you know.

MR. HORTON: Right.

MR. BAUGHMAN: How often do we do it on those wood-fired, by the way?

MR. HORTON: Every day.

MR. BAUGHMAN: Okay. Positively?

MR. HORTON: No.

MR. BAUGHMAN: The gas-fired boilers have a hard manual reset, high limits --

MR. HORTON: Yes. You have to --

MR. BAUGHMAN: -- gas pressure, switches, and so forth?

MR. HORTON: -- go up there and restart them from the building, the boiler.

MR. BAUGHMAN: Being the Nebraska was put in roughly two years ago, is it low knocks to meet the air quality requirements for Tennessee?

MR. TIPPS: Yes.

MR. BAUGHMAN: Just didn't see that
listed, so I was kind of interested in that.

My same thing again is, nowhere in here do we have those definitions, and so that would apply also. I do have a problem with checking alarm circuitry. Yeah, the alarm light goes off --

MR. HORTON: How often would you like to see positive?

MR. BAUGHMAN: At minimum, once a day. It depends upon the quality of water that you've got, kind of the overall operations of the boiler.

MR. HORTON: If it's running on a high load and they're needing steam into distillery, it's hard for --

MR. BAUGHMAN: It's hard for some places to do it once a year instead of once a day.

MR. HORTON: There's times that we could work it in.

MR. BAUGHMAN: Well, what I'm -- and through this brief conversation, I get the interpretation that we're not -- although I thought these boilers weren't being run that much presently.

MR. TIPPS: They're not. That's
part of my job, to make sure we don't burn any more gas than we have to. So we try to schedule the loads.

MR. BAUGHMAN: So we call them presently to check it, I mean, even when the boiler is warming up, low fire, you can take the low water down and do a positive check.

What I would like is to make sure that as we're doing these checks, it bothers me that, for one, because of the load that's on the boiler, we're checking alarm circuitry and not actual operation of the low water. In other words, we're blowing the column down, we can check, but we're not actually physically shutting the burner off. And I'd like to --

MR. HORTON: Well, like I said, we can do it on start-up. While we're coming up, going to need it, we can fire it up and --

MR. BAUGHMAN: There needs to be some consistent basis whether it's once a day, once a week. But what we're doing now is we're just checking the circuitry and we're not actually checking the true low water itself.

CHAIRMAN MORELOCK: Any other questions or comments?
Do we have a motion?

MR. ROBINSON: Motion to approve.

DR. CANONICO: Second.

CHAIRMAN MORELOCK: And again, this is contingent on corrections to the manual and site inspection and all that, so -- all right.

Any other discussion?

All in favor say, "Aye."

IN UNISON: Aye.

CHAIRMAN MORELOCK: Opposed?

Abstentions? Not voting?

All right, gentlemen. You have a variance for your gas boiler.

DR. CANONICO: Contingent.

MR. TIPPS: Thank you.

CHAIRMAN MORELOCK: Thank you.

Okay. We will go to Item 14-17 that we just added to the agenda today. This is for the Wacker Polysilicon.

So gentlemen, this is a discussion.

We won't be taking any action on this, but we'll let you present your information.

Please introduce yourselves.

MR. KASTENBERGER: Thomas Kastenberger. I'm head of engineering for Wacker
Polysilicon.

MR. ENG: Richard Eng, mechanical integrity manager for Polysilicon.

Thank you for adding this item to the agenda today. I just want to take this opportunity to introduce formally Wacker to the board. Wacker -- I assume you have a copy of this right now. Wacker Polysilicon North America is having a project in Charleston, Tennessee. And we have acquired about 550 acres in Bradley County for this particular project.

Currently, the project is still under construction. We are due to complete construction sometime next year, commission, start-up, and production soon after that.

It's a fairly large project, well over $2 billion as of today. As a result, naturally we will employ a lot of people within the state of Tennessee in many different locations.

The plant will make ultrapure -- high pure polysilicon for the solar industry; predominantly, I would say, almost exclusively for the solar industry, and this product would be sold worldwide.
The company is quite old, 100 years of operation. And of that 100 years, we've been making polysilicon for almost half a century. And that technology, that design, that process that has been in operation in Germany, it is being brought over to Tennessee as we speak today.

I think you can see from the write-up, we're not really asking for a variance, which is a break. Okay? We wanted to introduce ourselves to the board and to introduce the mechanical integrity, risk-based inspection program to the board. And we will use this program to be in compliance with the State of Tennessee in terms of pressure vessel -- registration of pressure vessel inspection.

The tool that we have selected is provided by Meridium. Meridium is a software RBI asset performance management company. And then we've done quite a bit of extensive research in the selection and evaluation of this particular tool. And we feel that this is the tool that will provide the functionalities and the sustainability that we need to keep this plant safe and operational.

I'm not sure how to provide all the
details and functionalities of the tool. And some
of it is on this particular write-up. And if you
have any questions, perhaps, maybe you can ask me
at any time.

CHAIRMAN MORELOCK: This would be a
greenfield site, correct?

MR. ENG: That's correct.

CHAIRMAN MORELOCK: Okay. So what
is your projected date to start using risk-based
inspection methods?

MR. ENG: We have actually started
already prior to completion of the plant. We have
used this tool already on a demonstration mode,
proof of concept, and have an actual output back
in October. And we conducted our risk assessment
of our particular assets with our colleagues in
Germany. So we've done, I would say, numerous
pressure vessels already that we have;
distillation columns, heat exchangers --

THE REPORTER: I'm sorry. Would
you speak up?

MR. ENG: Which part?

THE REPORTER: That last.

MR. ENG: Okay. We have done
numerous assessments already with our colleagues
in Germany for our assets in our particular site.

Okay? Some of these assets are distillation
columns, heat exchangers, phase upgraders, storage
tanks, knockout pots. Very common equipment in
the chemical industry.

CHAIRMAN MORELOCK: All right. So
will the -- will the size of this facility in
Charleston be identical to the facility in Germany
as far as the sizing of the equipment, the
production rates, temperature pressures, flow
rates?

MR. ENG: I would say the operating
conditions are very similar, and some of them are
identical. The equipment, in terms of materials
of construction and design and composition and
pressure and temperature, all of these are not
identical always. They're very similar, and if
it's not identical, it's an enhancement of what we
already know.

CHAIRMAN MORELOCK: Well, my point
being is, "similar" and "almost" will greatly
affect damage mechanisms and all that.

MR. ENG: That's correct.

CHAIRMAN MORELOCK: So your
evaluation in Germany will not be the same
evaluation in Charleston, Tennessee.

MR. ENG: I didn't mean to imply that we're doing implement. It's the expertise on our equipment and our operations and our materials of construction that was used, not so much to duplicate the other equipment, though in some cases, it is true.

CHAIRMAN MORELOCK: That's why I asked the question. Initially is -- implementation of RBI is excellent. No issues there. But you'll have to have some time, obviously, to have a baseline, trend that data. You'll have to take process hazards analysis and all these evaluations for determination of likelihood of failure, consequence of failure, to build this matrice and to refine the matrice for the facility in Charleston.

MR. ENG: Absolutely.

MR. KASTENBERGER: If I may answer that. The process, the chemistry, the temperatures, the pressure ratings, that is very much comparable to what we're doing in our facilities in Germany. The difference in the equipment, if there is difference, comes basically due to the different environment of codes and
standards. All our equipment in Germany is based on German and European codes and regulations obviously, and here, we're following ASME codes and other local regulations.

So that is where the difference in the equipment design comes in. But the material of construction chosen for a particular process chemistry is based on our experience in Germany.

CHAIRMAN MORELOCK: Okay.

MR. ROBINSON: That's a good thing that you bring that forward.

Just so you know, we have a -- we have an outlet for you guys as far as special considerations for special materials of constructions or designs such as DEN -- DEN specs or perhaps European PEDs.

So with that in mind, if you decide to use an internationally-made piece of equipment, it would require you to bring it before the State to make a determination as to if it's acceptable prior to making the installation, and even building units. So just -- we call that a Tennessee special.

In addition to that, one of the other avenues that's available to you for your
risk-based analysis is the NBIC. And I don't know if you've had a chance to look at it, but the NBIC also gives you standards to perform your risk-based inspection programs and to set it up. But at this point, I know we have not -- we -- America has adopted the PED in some aspects, but I have still seen some jurisdictions or entities reluctant to accept the PED. So if you have a PED-stamped piece of equipment, don't assume that it's right.

MR. ENG: No, we don't assume that.

MR. ROBINSON: Don't assume it's capable of meeting the requirements of API or ASME.

MR. ENG: I think all of our equipment are U.S. ASME, every piece.

MR. KASTENBERGER: Yeah. I don't think we have any Tennessee special --

MR. ENG: No Tennessee specials.

MR. ROBINSON: Very well.

MR. BAUGHMAN: Richard, do you have any piece of equipment that are -- that have already been utilized; in other words, a used piece of equipment?

MR. ENG: No.
MR. KASTENBERGER: All new.

MR. ENG: It's all new construction, all new fabrication.

MR. BAUGHMAN: That makes it a bit better.

MR. ENG: Baseline readings, based on all new equipment.

MR. BAUGHMAN: Very good.

MR. ROBINSON: Are you guys conducting your own non-destructive evaluations or have you got outside --

MR. ENG: We will most likely resource that and farm that out. We don't have an internal crew to do that, though we have some expertise in terms of CWI inspectors, other inspectors, eventually API 510 inspectors, and perhaps API 570 inspectors. That, we will bring in-house over time.

MR. ROBINSON: Okay. I'll turn to Brian.

Mr. Chairman, is there any standards as far as non-destructive testing for risk-based analysis as far as -- I know there was some discussion topside. I haven't been privy to it, but there was some discussion about
recertifying the ADT inspectors to a new standard
as opposed to -- I guess it was, what, MIL
Standard 410 or something like that years ago?

CHAIRMAN MORELOCK: Well,

there's -- ASME is working toward kind of a global
certification for NDE.

MR. ROBINSON: Under Section 5?

CHAIRMAN MORELOCK: Yes. Well --

yes. Yes.

So that work is going on. I think
the project is called ANDE, and so that's ongoing
right now.

Just for your information, we do
have a company in the state of Tennessee that does
have an RBI program. It's Valero and --

MR. ENG: Jeremy Gross.

CHAIRMAN MORELOCK: Yes.

MR. ENG: He's not here today.

CHAIRMAN MORELOCK: Yeah. And they
will be presenting their annual report in March.

They missed the deadline for the December meeting
or they would be here today.

But Eastman Chemical Company also
does RBI. But we are also a national board
owner/user, so it's built into our owner/user
program. So that would look a little different than Valero's program.

MR. ENG: We did talk to Valero last time before we committed to this particular software package. We spent some time with them talking to Jeremy Gross and his -- I guess his program is quite detailed. And we structured some of ours according to how they conduct their business.

CHAIRMAN MORELOCK: So really, I guess the next step for you would be to assemble your program and then let us see what it looks like with actual examples of the equipment; risk rankings and . . .

MR. ENG: Yeah. We have that as well, but perhaps this meeting, we're not going to be able to present that in full. I would like to offer the entire program and package and all the printouts, all the technical documentation necessary for you to make a review and critique of what we do.

CHAIRMAN MORELOCK: So what is your purpose for implementing an RBI program? What's the desired outcome of that?

MR. ENG: I think it's twofold:
One is -- equipment safety is the first requirement. And second is to be efficient in our resources, to be deployed in our inspection program and our mechanical integrity program without any compromise to the safety component. So there is the -- the safety component and the economic component. And that's really the driver for us. And to be in compliance with all state and federal regulations.

CHAIRMAN MORELOCK: Well, and the only reason the RBI program would come before the Tennessee board is if you seek to extend inspection frequencies.

MR. ENG: That's correct. And we want to be able to sit in front of you and present our package with all of the technical information necessary for you to make a good judgment on our variance.

CHAIRMAN MORELOCK: So are you going to start up and run together the baseline data to establish the projection?

MR. ENG: It is our program today. Since the equipment is all new, it's not operational, we will start our baseline readings right after the equipment has been turned over to
operations. And before the first window within the two-year inspection time, we will have two data points in which to do our calculations and evaluations.

CHAIRMAN MORELOCK: Okay.

MR. ENG: So we have a baseline reading and then follow-up data point prior to a two-year window.

MR. KASTENBERGER: And with that, we would like to prove that most of our processes, as we know them from our experience in the facilities in Germany, are noncorrosive applications, truly.

CHAIRMAN MORELOCK: Okay. And you'll just have to prove that through NDE.

MR. ENG: That's the goal.

MR. KASTENBERGER: Exactly.

CHAIRMAN MORELOCK: Very good.

Anybody have any questions?

MR. ROBINSON: Are you planning on operating any steam boilers?

MR. ENG: Yes. Three.

MR. ROBINSON: Okay. Keep in mind you said two years, so the steam boilers --

MR. ENG: It's annual.
MR. ROBINSON: Yes, sir.

MR. ENG: I hear all the variance that came through today, so perhaps you'll be seeing me again very soon.

MR. ROBINSON: Yes, sir. Very well.

MR. ENG: Okay. That's a forecast, not a warning.

CHAIRMAN MORELOCK: Dr. Canonico, you've got a question or comment?

DR. CANONICO: Yeah. On the original letter, you talk about these are all compliant with API 510 pressure vessel inspection code, API 570, et cetera. Repair, alteration, and reconstruction.

Are you bringing in used equipment?

MR. ENG: No.

DR. CANONICO: What does "reconstruction" mean, then?

MR. ENG: It could be an alteration, but not a used piece of equipment. If we, perhaps, add a nozzle or change a location or something, I don't -- we don't have any plans of buying used equipment.

MR. KASTENBERGER: We would
certainly buy no used equipment, but we ran into situations -- I mean, this project is a fairly large project, and it originated four years ago. And in the course of the design process, things are changing. Scope changes come up. Equipment is already ordered, in certain cases already, or received through us, and we still have to make some changes to it. Those will be the cases where we have some alterations to it.

DR. CANONICO: I apologize for walking out before, but one thing I want to say is I commend you for coming to Tennessee and bringing these jobs here.

MR. KASTENBERGER: Thank you.

MR. ENG: We're happy to be here.

DR. CANONICO: The other question I have is, these are -- are these going to be pressure-retaining components?

MR. KASTENBERGER: Yes.

DR. CANONICO: And are they being built to ASME?

MR. ENG: Yes.

DR. CANONICO: And they're stamped?

MR. ENG: They're all stamped.

DR. CANONICO: Okay.
MR. ENG: And naturally, the majority of these vessels will be Tennessee tagged prior to operation.

DR. CANONICO: And they're being built in Germany?

MR. ENG: Globally.

MR. KASTENBERGER: I would restrict that a little bit. Not really globally. We have -- we are sourcing from Germany, and if we source from Germany and it's for a specific equipment where we think we have specific intellectual property on it, so we want to keep the experienced manufacturers. They are all ASME-certified manufacturers, so there is no issue with bringing that equipment over here.

We're sourcing from France for the same reason. There are some experienced vendors and suppliers that have manufactured equipment for us in the past.

We are sourcing a lot of equipment here in the United States, equipment where we don't have any specific IP concerns: standard storage vessels, some distillation columns, some filter vessels. There's a lot sourced here in the U.S. as well.
Those are the -- really the main sources generally: France -- Austria, I forgot to mention Austria -- and several manufacturers here in the U.S.

MR. BAUGHMAN: So are any of those alterations happening at the jobsite facility itself once the equipment arrives?

MR. KASTENBERGER: Not that I'm aware of, no. If we had -- if we had to change, we either sent it back to the original manufacturer, or we chose one of the U.S. companies here, the Roberts Company, to do some modifications for us.

CHAIRMAN MORELOCK: Okay.

MR. ENG: So when I say globally, I don't mean like North Korea.

MR. KASTENBERGER: "Globally" sounds -- it sounds like you go out for multiple bids and pick the cheapest vendor. That's not what happened on this project. We selected qualified vendors. We had every supplier who wanted to end up on the supply list vetted through a rigorous qualification process, and we ended up with well-known manufacturers that already had delivered equipment either to our polysilicon
facilities or to other Wacker facilities.

And so I'm confident we have a portfolio of qualified suppliers, not just the cheapest that are on the block.

CHAIRMAN MORELOCK: All right. Any other questions?

MR. ROBINSON: Yes. If you are doing repair to your operations here in the United States, then it would be prudent for you to notify of the following NBIC requirements and notify the State of Tennessee that the repairs are being made.

MR. ENG: Okay.

CHAIRMAN MORELOCK: Any R Stamp holder can do those alterations for you.

And if you send a vessel out of state to one of these manufacturers to have it done, just remember that anytime you send a vessel out and back in, you're going to have to get permission to bring it back into the state of Tennessee. So let the State know that -- there's a one-page form you fill out, and that will get you back into the state of Tennessee.

MR. ENG: Okay. No problem.

MR. JACKSON: I notice in the
paperwork, they're going to go for an owner/user program. Are they going to implement that at the time this thing goes into operation, shall we say, or . . .

MR. KASTENBERGER: The question is introducing or planning to introduce an owner/user? Is that the question?

MR. JACKSON: Yeah. That's what you've got in the thing here.

MR. KASTENBERGER: That's not our primary goal. Down the road, we might, yeah, go for it.

MR. ENG: We're talking several years down the road, we might consider that. We're not in a position or a need or a desire to go that path.

MR. JACKSON: You reference NB-23 RB-3231 talking about owner/user program, so . . .

MR. ENG: No, we're not going to go for that.

MR. JACKSON: Okay.

MR. ENG: NB-23, part 3, perhaps, is what we're going to need.

CHAIRMAN MORELOCK: NB-23 is just NBIC.
MR. ENG: Yeah. Part 3 is --

DR. CANONICO: What's the stamp?

CHAIRMAN MORELOCK: NB-371 or

something like that.

DR. CANONICO: You get an R Stamp.

Once it's stamped, then it's passed the code.

CHAIRMAN MORELOCK: Right.

MR. ENG: We'll follow NB-23, Part 3, for our repairs and alterations.

CHAIRMAN MORELOCK: Very good.

Any other questions or comments?

MR. ENG: You mentioned does it need a vote, and I wasn't sure how to respond. So I'm thinking perhaps in the March meeting, I was going to present a more complete package with all of the items that we just mentioned here with an actual output with a risk matrix for select equipment that we have conducted already. Okay?

And I was thinking if I can present that package to the board as per their technical review in terms of correctness, documentation, and methodology, I would like the board to provide some feedback whether that validates our program or not in terms of the direction and what the board wants to see from us.
DR. CANONICO: That would be in the open meeting.

CHAIRMAN MORELOCK: Oh, yeah, well, that would be in the March meeting, yes.

DR. CANONICO: I thought he was asking --

MR. ENG: No, no. Not today. For the March --

CHAIRMAN MORELOCK: For the March meeting.

MR. ENG: But I'm just asking myself the question, does it need a vote? And I'm thinking yes.

CHAIRMAN MORELOCK: We would approve it on an annual basis. You'd make an annual report.

MR. ENG: Right, in the same fashion as Valero was doing today.

CHAIRMAN MORELOCK: Yeah, talk to Valero and review their program, and that will help you get your program together, to talk to them.

MR. KASTENBERGER: So if we present this package in March, the vote would be on -- on what, exactly, is my question, I guess.
CHAIRMAN MORELOCK: To implement your risk-based inspection program. And then it would be -- then you would provide an annual report to the Tennessee board of what your current equipment status is as far as risk ranking, what you've monitored in the past year, your findings, the trends of the equipment. And then after that report, then we would vote to extend that for another year.

MR. KASTENBERGER: Okay. And the vote basically would be on a variance from the two-year inspection requirement, the internal inspection requirement. Is that my understanding?

CHAIRMAN MORELOCK: That -- that -- for pressure vessels only.

MR. KASTENBERGER: Yes, for pressure vessels only.

CHAIRMAN MORELOCK: The boiler inspection variance is a whole different --

MR. KASTENBERGER: That is separate.

CHAIRMAN MORELOCK: So in order to -- we can approve the program, but then you're going to have to show us data that the equipment's operated safely and that your trends, as far as
damage mechanisms, corrosion rates, risk ranks,
and all that will keep the vessel safe if you go
beyond that two-year inspection. That's why I'm a
little concerned with this brand new equipment.
You're going to have to run it at least one
two-year inspection cycle to even have two data
points.

MR. ENG: That's correct.

CHAIRMAN MORELOCK: So it may be --
you may be two years down the road before you come
back and say, "We'd like to extend inspection
frequencies out," because you'll have to have data
to support that extension. And with a brand-new
greenfield facility, you're not going to have that
data right out of the box. You'll have
projections --

MR. KASTENBERGER: Correct. We'll
have a theoretic projection through the initial
assessment. Our plan is, right off the
start-up -- I mean, since we're starting up so
much equipment, we need to go through a staggered
start-up. And we can't do baseline readings just
on everything within a very short period of time.
It takes a while. But we'll go through a series
of baseline readings, and within -- definitely
within the first two years, we'll go through a
second reading of every piece of equipment where
it's appropriate, and we would present that as --
as the proof that we have a noncorrosive
application.

CHAIRMAN MORELOCK: Right. So
you're going to have to have data to prove that as
well.

MR. KASTENBERGER: Right.

CHAIRMAN MORELOCK: So you may
stagger -- I don't know your facility. I mean,
you may do certain sections of your facility, and
you may bring it in under RBI in stages. It's up
to you. We're not going to tell you how to do it.
We'll just review what you bring. But we'll leave
that up to you.

Yes, Dr. Canonico?

DR. CANONICO: I have a little
trouble with risk-based inspection. I know it's
popular now. But 50 percent of the problems are
human beings, so I worry about how good risk-based
inspection is unless you're psychologically
checking everybody coming in. I'm not going to
vote against it based on that, but that is a
concern.
MR. ENG: I guess you're referring to incidents and accidents and near-misses and things of that nature. Yes, that's all operational side, which, if you set your IOWs correctly, it should be somewhat independent of the equipment itself.

MR. KASTENBERGER: The big benefit that we see in the risk-based inspection program is, you're taking an effort up front, inspecting -- not inspecting -- discussing, assessing every piece of equipment individually. And in the theoretical session, go through the degradation mechanism, the damage mechanism that could theoretically show up under the circumstances that you have: material of construction, chemistry and pressures and temperatures and so on.

And based on that, you design or you define your inspection program. What is the right method of inspection? What is the right frequency? What is the right location of a piece of equipment?

If you do it traditionally and just employ a time-based -- yeah, it is more or less than a random inspection. You open everything,
you look at everything the same way, you spread
out your resources where they might not be needed,
and you might overlook areas where there is really
high risk potential. So overall, I think you have
a high chance -- and a higher chance -- of
bringing your resources -- your inspection
resources to where they are really needed and
where they generate value in terms of identifying
potential damage. That's the big benefit of
looking at everything up front.

And on-the-other-hand side, for us,
that is a -- I think that's a specific -- with our
chemistry, the chemistry that we -- that we run
is, if you use the right material of
construction -- which I think we know what type of
materials they use -- is a very nonreactive type
setup. It's noncorrosive. It doesn't do anything
to your shell, to your containing shell.

But it is only noncorrosive as long
as you can keep it dry, meaning if you don't have
any reaction with humidity or with moisture.

We know from experience the worst
thing that we can do to our equipment is opening
it up and exposing it to the atmosphere, because
then you have humidity entering the vessel; and
that humidity with traces of remaining chemistry
in there, can create HCL. HCL can introduce
corrosion, stress crack, corrosion. It's -- it's
the worst thing, in our experience, that we can do
to our equipment. So we'd like to keep it
contained, look at it from the outside, make sure
we truly have no surface corrosion happening, no
corrosion under the insulation happening, things
like that.

But by all means, keep it
contained. That means, for us, we'll keep it in
good shape.

CHAIRMAN MORELOCK: Very good.

Any other comments?

All right, gentlemen. Thank you.

Put us a program together, and get it on the
agenda, and we'll review it.

MR. ENG: 45 days.

MR. KASTENBERGER: One final
question, I guess: What does it really take to
get it on the agenda? Because we were expecting
to be on the official agenda today.

CHAIRMAN MORELOCK: Let Mr. Chapman
know 45 days in advance of the next meeting, and
if you've got something for us to review, we need
that 45 days in advance of the meeting so we have
time to review it and have comments ready at the
meeting. Okay?

MR. ENG: Okay.

MR. KASTENBERGER: Okay. Thank
you.

CHAIRMAN MORELOCK: All right.

Thank you.

Okay. It is 12:15, and I held you
over till 1:00 the last meeting. I'm not going to
do that this time.

The rest of our agenda is
discussion items.

Deborah, you want to take just a
minute or two and talk about the fall conference?

MS. RHONE: Okay. Yes.

Just to bring up some things that
we had discussed in the past, that we did receive
approval through our fiscal office where we would
be able to accept the funds for the registration
of the conference. We would be able to set up a
special account in our current Innova System to
process those funds.

We also discussed if there were any
cosponsorship, it would be paid directly to the
venue, opposed to any funds coming through the
department. Our administrator has made a
suggestion that we have a combined conference with
all the units for the conferences. And then we
also discussed the possibility with the
registration fee, that it would include conference
materials, meaning handouts, any shirts, and then
the costs for the awards banquet.

When the time frame was decided, we
would need to settle on a date, a location, and
then an actual cost for the conference.

And any additional information, you
know, we have not discussed any further.

CHAIRMAN MORELOCK: Okay. So are
we shooting for -- what's our time frame to maybe
kick this off?

MS. JEFFERSON: We haven't set a
date because we're -- since we're going to do a
combined, the goal is to do a combined, it's going
to be a division conference so that we can have
information about boilers, elevators, amusement
devices, labor standards, everything. We have to
confirm with all the other units to find out when
their deadlines are for training.

MS. RHONE: Right, yes.
MS. JEFFERSON: And that's something that I think you-all were working on.

MS. RHONE: Right.

MS. JEFFERSON: So if it's fall, we would be looking towards October, probably October. So let's see what we can do.

MR. BAUGHMAN: And from what I understand, when you say it's combined, so how many elements does that actually combine in one conference?

MS. JEFFERSON: It's going to include the entire division. All of our training is going to be performed or conducted during that conference. It's not going to only be the boiler, because we're going to try to collaborate our efforts so that we'll have resources. And we'll have everybody -- we'll actually be in a position so everybody can get their annual training. So it's going to be an annual conference.

MR. BAUGHMAN: How many days are we looking at? If we're going to combine all the units, what are we talking about?

MS. JEFFERSON: Maybe three or four.

MS. RHONE: Yeah, since in the past
we've had -- that's what we've done in the past. We've had like 3 1/2 days. And, of course, you know, the conferences would go into breakout sessions. You know, we'd have the general session, and then they would go into breakout sessions for the appropriate training for the boilers, elevators, things of that nature.

MR. BAUGHMAN: We wouldn't look to hold the board meeting at that time, or could we --

CHAIRMAN MORELOCK: We have done it in the past.

MR. BAUGHMAN: Well, being in October, that's why I was wondering if we could adjust it to make it coincide with that.

MS. RHONE: Yes.

CHAIRMAN MORELOCK: Well, we'll look forward to updates.

MS. RHONE: Okay.

CHAIRMAN MORELOCK: Thanks for all the hard work on that.

I am not going to attempt to start Rule 800-03-03, but what I am going to say is poor Eugene is a good sport. We didn't get to his comments again. But what I want to do is, we are
going to work on addressing Eugene's comments, as well as some unfinished comments concerning factors of safety and some things like that. We're going to do that through e-mail. And we'll -- the board will work on these through e-mail, and the goal will be at the March meeting, we'll bring you a complete item, public forum, for a discussion and a vote. Because I think we're close enough we can do that. And so that's -- that will be our plan on the March agenda. We'll have this item for a voting item.

The concern over the factor of safety -- and I've looked at ASME UG-27 versus the equation in the current rules, it's very similar. We just -- we would take ultimate tensile, divide it by a factor of safety, replace that with allowable stress. With what we see in the code versus values that are published in the rules today, we can make some of those things work. But what we'll do is we'll get that cleaned up. Sydne has done an outstanding job of going through the transcripts, coming up with all the comments, working with the boiler unit to address comments, and going through all those rules and reorganizing it. So we will work off the November version, and
then we'll try to have a final version ready in March for the general public to review, and we'll vote that as a reorganization of -- and revision of Rule 800-03-03.

Anybody have any concerns about that?

All right. Hearing none, then that's what we'll do.

We have no rule cases or interpretations.

And our next board meeting will be Wednesday, March the 4th, right here at the Department of Labor.

I wish y'all a very Merry Christmas, and do I have a motion to adjourn?

MR. CHAPMAN: Mr. Neville, you wanted to ask something?

MR. NEVILLE: As far as . . .


MR. NEVILLE: Yes. I've got Randall Harris from US Nitrogen here. He'd like to extend an invitation to any of the board members to tour their facility. They're building a new facility in Midway, Tennessee, and they've got some unique processes with their waste
deepwaters. And so if anyone would entertain
coming to their facility, we can set that meeting
up.

CHAIRMAN MORELOCK: Okay.

MR. ROBINSON: Are they prepared to
implement some new equipment or processes or . . .

MR. NEVILLE: Yes. All of this is
new. This is a new facility, and we will be
presenting four boilers for a variance proposal in
March.

CHAIRMAN MORELOCK: Mr. Neville,
could you have the gentlemen introduce themselves
formally so our reporter can get their names?

MR. NEVILLE: Yes.

MR. HARRIS: Yes. I'm Randall
Harris, the chief inspector for US Nitrogen.

MR. DANIEL: I'm Nathan Daniel,
maintenance engineer.

CHAIRMAN MORELOCK: All right.

Anything else?

MR. BAUGHMAN: Just -- and it made
me just wonder when you talked to Sam just briefly
and said "interim chief" earlier instead of
"assistant chief," where do we really stand?

Where are we sitting on things right now, just for
MS. JEFFERSON: I'm not sure if you were at the hearing, the legislative hearing a couple of weeks ago, --

MR. BAUGHMAN: I was there.

MS. JEFFERSON: -- but I explained that we have had some applicants. Unfortunately -- yeah, we had 23 applicants. Unfortunately, only one person qualified, and that person didn't decide to take the position.

We did contact Human Resources, Department of Human Resources, and we asked them to find applicants. They found applicants, but we have to go back and take a look at the qualifications that we have. We have a ten-year requirement for the chief, and so we'll probably have to reduce that. We're in the process of reducing that requirement. And if we do, we can possibly pick up some applicants that we had to overlook. So that's what we're doing now.

MR. BAUGHMAN: I remember when we were there, and Thelma, Ms. Harper, was -- had some good questions and all with it.

But I just -- we get questions from in the field, and so that way, I have addressed it
as far as that end of it, just so we know from our
own end.

But yeah, I know it's a task, but
hopefully we can get all that --

MS. JEFFERSON: We hope to work on
that. We're working on it.

So like I told Ms. Harper at the
legislative hearing, it's not that we're not
working on it. Unfortunately, the applicants that
we're receiving, they're just not qualified.

MR. BAUGHMAN: Well, she asked two
things, too, and you addressed them. Is it pay or
is it qualifications? And --

MS. JEFFERSON: We're taking a look
at both.

MR. BAUGHMAN: Super. Okay. Thank
you very much, Ms. Jefferson.

CHAIRMAN MORELOCK: All right.

Anything else?

MR. CHAPMAN: No.

CHAIRMAN MORELOCK: All right. All
those in favor of adjournment, stand up and have a
Happy New Year and a Merry Christmas.

IN UNISON: Merry Christmas.

(Meeting adjourned at 12:25 p.m.)
CERTIFICATE

STATE OF TENNESSEE    )
COUNTY OF WILLIAMSON )

I, Deborah K. Watson, RPR, CRR, LCR# 446, a Notary Public in the State of Tennessee, do hereby certify:

That the within is a true and accurate transcript of the proceedings taken on the 3rd day of December, 2014.

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 21st day of December, 2014.

________________________________________
Deborah K. Watson, RPR, CRR, LCR# 446
Notary Public State at Large
My commission expires: 9/20/2016
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| mouth 91:24 | 37:3 37:5 37:7 37:8 | 70:14 71:3 71:3 |
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