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

QUARTERLY MEETING OF THE
STATE OF TENNESSEE
BOARD OF BOILER RULES

March 4, 2015
APPEARANCES:

Brian R. Morelock, Chairman
Owner-User Representative
235 Picadilly Lane
Gray, Tennessee 37615

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Insurance Representative
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Dr. Glen Johnson, Board Member

Sam Chapman, Assistant Chief Boiler Inspector

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

Mark Finks, Esq.
Assistant Administrator, State of Tennessee

Dan Bailey, Esq.
Legal Counsel, State of Tennessee

Carlene Bennett
Board Secretary, State of Tennessee
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## AGENDA

I. Call to Order

II. Introductions and Announcements

III. Adoption of the Agenda

IV. Assistant Chief's Report

V. Old Business (none)

VI. New Business: 15-01, 15-02, 15-03, 15-04, 15-05, 15-06, 15-07, 15-08

VII. Open Discussion Items

* Reorganization of Rule 0800-03-03 - Moving Code Requirements into Tennessee Rules/Realigning State rules for ease of use by Installers and Owners

* Fall Conference Update

* Boiler Operator Training and Certification - David Baughman
VIII. Rule cases & interpretations - There are no rule cases and interpretations.

IX. The next Board of Boiler Rules Meeting is scheduled for 9:00 a.m. (CT), Wednesday, June 10, 2015, at the Department of Labor & Workforce Development office building located at 220 French Landing Drive, Nashville, TN.

X. Adjournment
CHAIRMAN MORELOCK: Good morning, everybody. Did everybody brave the weather to get here safe and sound, I hope? And we've got even more fun weather coming this afternoon, so we'll try to be very mindful of everybody's time today.

I want to welcome you to the March Tennessee Board of Boiler Rules meeting, and I want to call the meeting to order now. I've got 9:04. We do have a quorum. Dr. Canonico is on his way, so he'll join the meeting as soon as he can.

There are agendas on the back of the table. If you would like one, please make yourself available to get one of those. I would ask that your cell phones be silenced. You can keep them on vibrate, but silence your cell phones during the meeting.

And our first item here is we're going to start with some introductions. And before I do that, I certainly want to welcome Dr. Glen Johnson back to the board. He was a board member in the past, and he has rejoined us. And we're tickled to have him back with us today, so we want to welcome him.
And so welcome, Dr. Johnson.

DR. JOHNSON: Thank you.

CHAIRMAN MORELOCK: We'll start with you.

THE REPORTER: Cassandra Beiling, Stone & George Court Reporting.

MS. BENNETT: Carlene Bennett, Board Secretary.

MR. CHAPMAN: Sam Chapman, Assistant Chief.

MR. ROBINSON: Eugene Robinson, Tennessee Boiler Board.

CHAIRMAN MORELOCK: Brian Morelock representing unfired pressure vessel owner-users.

MR. BAUGHMAN: I'm Dave Baughman, board member.

DR. JOHNSON: Glen Johnson, representing mechanical engineers.

MS. JEFFERSON: Administrator.

MR. FINKS: Mark Finks, Assistant Administrator.

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

MR. MORRISON: Steve Morrison. I'm the power and recovery manager for Domtar Paper
MR. FISH: Gary Fish. I'm with Steve, with Nalco Chemical.

THE REPORTER: I'm sorry. I can't hear.

CHAIRMAN MORELOCK: Y'all need to speak up so Cassandra can hear you, please.

MS. RHONE: Deborah Rhone, Boiler Office Supervisor.

MR. PERRY: Steve Perry, soon-to-be boiler inspector.

MR. HOLT: Tim Holt, boiler inspector.

MR. GLADSON: Jeff Gladson, Eastman Chemical.

MR. ROBERTS: Randy Roberts, Eastman Chemical.

MR. LAYNE: Rob Layne, Eastman Chemical.

MR. GROSS: Jeremy Gross, Valero Memphis Refinery.

MR. ENG: Richard Eng, Wacker Chemical.

MR. KASTENBERGER: Thomas Kastenberger, Wacker Chemical.
MS. DOWER: Jan Dower, Commissioner Phillips' office.

MR. HUBBARD: Rodney Hubbard, MedFac Engineering.

MR. HARRIS: Randy Harris, U.S. Nitrogen.


MR. NEVILLE: James Neville, Neville Engineering.

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

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

CHAIRMAN MORELOCK: Again, welcome everybody.

As far as announcements go, we just want to make you aware, in the event of an emergency or a natural disaster, security personnel in the building will either direct us to a safe location in the building or direct us to the Rosa Parks side of the building for a safe location. And please be careful today out in the
weather, as we do have some inclement weather today. So I just wanted to bring that to your attention.

Just a point of information, as we go through the agenda, we'll ask representatives to come to the table here and again state your name and position, and then present your item, and then we'll discuss the item and vote on it. So just be in mind of that.

Our next item, unless there's any other announcements -- are there any other announcements?

(No verbal response.)

CHAIRMAN MORELOCK: Okay. Our next item is the adoption of the agenda which you have before you. And so do I have a motion to adopt the agenda?

MR. ROBINSON: So made.

CHAIRMAN MORELOCK: Do I have a second?

MR. BAUGHMAN: Second.

CHAIRMAN MORELOCK: Okay. Are there any changes, additions, deletions to the agenda?

(No verbal response.)

CHAIRMAN MORELOCK: Okay. Hearing
none, I'm going to call the question. All in favor say, "Aye."

(Affirmative response.)

CHAIRMAN MORELOCK: Opposed?

(No verbal response.)

CHAIRMAN MORELOCK: Abstentions, not voting?

(No verbal response.)

CHAIRMAN MORELOCK: We have an agenda.

Next item on the agenda is the assistant chief's report, so Mr. Chapman, I'll turn it over to you.

MR. CHAPMAN: Thank you. The number of inspections done for the last quarter from the state inspector was 2,637; insurance agency is 5,293, giving us a total of 7,930.

Total delinquent from the State is 1,007; from the insurance agency is 1,126, bringing us a total of 2,133.

Number of code violations found was 19, and we had 5 uncorrected.

QC review performed was 3 and boiler variance is 1.

The interviews for the chief position
is going to be performed, scheduled. We have --
the Montgomery County inspector has been filled,
and we are going to be scheduling interviews for
the Boiler Inspector 1 for Davidson County, which
will make us have 13 inspectors.

CHAIRMAN MORELOCK: Any questions or
comments about the chief's report?

(No verbal response.)

CHAIRMAN MORELOCK: All right, then.

Our next item is old business, which we do have no
old business.

So moving on to new business, our
first item is 15-01, Valero Refinery. They're
going to present their Risk Based Inspection
Program to the board. So, again, if you'll come
forward. And before you introduce yourself, let
me state one more thing. As we go through these
items, if any of the board members have a conflict
of interest, they need to express that. Remind me
to ask that every time.

So are there any conflicts of
interest for this item?

(No verbal response.)

CHAIRMAN MORELOCK: All right.

Hearing none, then you can proceed.
MR. GROSS: Good morning, Board and guests. I do have copies of the report. If I do need to pass those around, let me know.

CHAIRMAN MORELOCK: Is it the same one that we've got today?

MR. GROSS: Same one.

CHAIRMAN MORELOCK: Okay.

THE REPORTER: Please state your name.

MR. GROSS: My name is Jeremy Gross. I'm the chief inspector of the Valero refinery in Memphis, Tennessee.

Going over our 2014 Risk Based Inspection Program status, I do want to read out the summary of our performance during 2014 for our annual review.

The Risk Based Inspection program continues to be active at the Valero Memphis Refinery. This includes conducting inspections per the risk assessments, "Evergreen" activities to keep the RBI program current, adding newly commissioned equipment to the RBI program, and improvements in the software used to maintain the RBI program.

The key activities related to the
program in 2014 are as follows: The Valero Memphis Refinery continues to maintain an effective Risk Based Inspection program utilizing good engineering practices. Inspections are planned and put in the maintenance schedule per the assignment damage mechanism. Results are documented in the next inspection schedule utilizing the RBI software.

We had seven process units that were taken offline for maintenance and inspection in 2014. During the outage, we executed inspection activities on 172 pieces of fixed equipment, 44 relief valves and other maintenance activities within the refinery.

Our routine maintenance activities during 2014 executed 106 internal inspections as well. The site also underwent four corporate audits within this calendar year. A Process Safety Management, Health Safety and Environmental, HF Alkylation Network, and Materials and Inspection Network Team evaluated existing programs of all disciplines within the refinery.

Following the assessments, GAP closure plans were set in place with required
completion dates. The site is currently pursuing the Voluntary Protection Program certification. We look to possibly pursue that in the 2016 calendar year. We're currently preparing for that.

As far as the "Inspection Type" and "Performed in 2014" and "Planned for 2015," internal inspections in 2014 performed were 279, and we have 51 planned for 2015. External inspections completed in 2014 were at 39, and we have 305 scheduled for 2015. Our CUI inspections, we completed 37 in 2014, and we have 24 scheduled for 2015. And then our jurisdictional inspections, we completed 393 of those inspections in 2014, and we have 212 currently scheduled for this calendar year.

Our Evergreen activities for the RBI program include:

- Documenting inspection results based on assigned damage mechanisms.
- Scheduling the next inspection per RBI methodology. Verifying fluid properties and operating conditions for damage assessment reviews.
- Non-intrusive inspection techniques.
are executed and captured during external inspections. Routine corrosion monitoring and specialty non-destructive testing is performed when required. A total of 51 pressure vessels were inspected on-stream utilizing specialty non-destructive techniques for cracking and local thinning damage mechanisms.

Revalidation of existing process units is ongoing. We take our PHA exercises and we take our fluid properties and our operation conditions and review those during each PHA that the PSM group administrates at our facility.

Considerable internal and external inspection work was conducted during this year along with scheduled CUI inspections.

Our jurisdictional inspection activity on registered equipment is maintained.

All existing process units have been through review of the RBI program in the last five years. This software integrates all design data, inspection history including equipment inspection reports, thickness monitoring data, evaluation for 55 types of corrosion and damage mechanisms, and inspection scheduling integrated with RBI.

As you can see in the Table, our Risk
Data and Distribution from our low risk to our very high risk, we have had some very good changes made throughout our inspection activities within the calendar year.

Our key inspection results, overall 278 internal, 136 external, and 12CUI inspections were performed this year in accordance with the RBI program. Jurisdictional inspections are maintained and up to date, but will be handled separately from the RBI program.

All equipment has a detailed inspection plan with a risk ranking for each damage mechanism. For each piece of equipment, a unique inspection plan is built to address the proper corrosion and damage mechanisms anticipated.

Activities to address issues discovered during inspection may include replacement of equipment, repairs, and increased inspection frequencies. There were five pressure vessels scheduled for replacement during the scheduled 2014 outage that were near end of life.

Risk based inspection activities completed this year reduced risk level on 102 circuits.
Valero is assembling the multidisciplinary procedures and required information to pursue the variance for "Extension of Boiler Internal Inspections."

We look to get that manual put together and possibly come back in June after we send that to Mr. Chapman for review. Possibly, may have to move it to the fourth quarter as well. That's our plan for the boiler extension. Any questions for me?

CHAIRMAN MORELOCK: Any questions?

MR. ROBINSON: I have one.

MR. GROSS: Yes, sir.

MR. ROBINSON: You had external audits performed on your company's procedures?

MR. GROSS: Yes, sir.

MR. ROBINSON: Were there any major findings?

MR. GROSS: From our findings, we only had two items that were needing to be addressed as far as the GAP closure and the audit process. And those items were in the procedure. They had not been updated, as far as in the database, and we corrected those issues within 30 days.
MR. ROBINSON: Is it safe to say that they were just editorial?

MR. GROSS: That's correct. Yes.

MR. ROBINSON: Very well. Thank you. That's all.

CHAIRMAN MORELOCK: Any other questions?

(No verbal response.)

CHAIRMAN MORELOCK: Then can I have a motion to accept Valero's report for continued implementation and use of their RBI program?

MR. BAUGHMAN: So moved.

MR. ROBINSON: Second.

CHAIRMAN MORELOCK: Last call for any questions or discussion.

(No verbal response.)

CHAIRMAN MORELOCK: Okay. All in favor say, "Aye."

(Affirmative response.)

CHAIRMAN MORELOCK: Opposed?

(No verbal response.)

CHAIRMAN MORELOCK: Abstentions, not voting?

(No verbal response.)

CHAIRMAN MORELOCK: All right.
Jeremy, thank you very much for your report.

MR. GROSS: Thank you.

CHAIRMAN MORELOCK: Our next item is 15-02. This is Wacker Polysilicon, and they're going to present their RBI program for the board to consider for approval to allow them to implement their RBI program.

So again, gentlemen, if you'll introduce yourself again for Cassandra and for our benefit. And while you guys are getting settled, are there any conflicts of interest from the board members on this item?

(No verbal response.)

CHAIRMAN MORELOCK: Okay. There are none. Thank you.

MR. KASTENBERGER: Thomas Kastenberger, Wacker Chemical Corporation. And I'm the head of engineering.


(Board responds.)

MR. ENG: Just to take you back on Valero's RBI program, we, too, have selected and implemented an RBI program within our facility.
On the document that was presented earlier to Mr. Sam Chapman, we can go over the components of this particular program, and if there's any questions that may come up, please feel free to ask them.

On the first tab, there's a description of our mechanical integrity program and policy statement. It's quite extensive. It is a program that entails not only the OSHA PSM MI elements, but also captures some of the requirements for the state of Tennessee and the requirements within the Wacker internal directives. So this program that's outlined for your review and comment contains all of those elements. If you have any questions on this particular aspect of the program, feel free to ask.

CHAIRMAN MORELOCK: As far as just covering Section 1 and 2 of your manual?

MR. ENG: Section 1 -- it is in the Section 1 part of the manual. Right.

CHAIRMAN MORELOCK: Are there any questions in Section 1.

(No verbal response.)

CHAIRMAN MORELOCK: Richard, I just
have a couple of editorials.

MR. ENG: Okay.

CHAIRMAN MORELOCK: And honestly, you've got the same letter in Section 1 and 2, introducing your RBI program, so these comments will apply to both sections since it's the same letter.

MR. ENG: Okay.

CHAIRMAN MORELOCK: But on that would be the third page where you talk about State of Tennessee Title 68 Compliance Drivers, Title 68, paragraph 3, Title 68 is the safety portion of Tennessee Code Annotated, so the paragraph you've referenced is correct, but it should be Tennessee Code Annotated -- TCA 68-122-110(3).

MR. ENG: Okay.

CHAIRMAN MORELOCK: Then the second paragraph that you reference will be similar, but that will be 68-122-110(4). Okay?

MR. ENG: Okay. I'll make the correction to those.

CHAIRMAN MORELOCK: Okay. You may want to include Tennessee Rule 0800-03-03.03 administration, parenthetical 1, which covers the construction standards for boilers and pressure
vessels in the state of Tennessee under your list of referenced documents there.

Moving down to the NBIC references, I have a question. Do you have current additions of the NBIC code?

MR. ENG: Yes, we do.

CHAIRMAN MORELOCK: Okay. The reason I'm asking is your references haven't appeared in NBIC since 2004. Okay?

MR. ENG: Okay.

CHAIRMAN MORELOCK: So the NBIC-23 is correct, but instead of RB-3237, that would be Part 2, comma, 4.4.7.

MR. ENG: I'll make that change.

CHAIRMAN MORELOCK: And then going down to the next reference, to the NBIC for RB-3231, that will be Part 2, comma, 2.3.3.

And that's the only comments I have for Sections 1 and 2.

MR. ENG: Okay. I do have the most recent copy of NB-23.

CHAIRMAN MORELOCK: Okay.

MR. ROBINSON: My question relates to implementation. When are you guys going to be fully functional?
MR. ENG: I'll give you my best forecast right now. Okay? We are still under construction. Parts of the plant are under start-up mode, meaning equipment checkout, lines checking out, P&ID checkout, electrical instrumentation checkout. For non-chemical systems such as compressed air, such as water, potable water, fire protection systems, all of those items are in a start-up mode today.

The plan is to have chemical introduced to the facility the second half of this year, third quarter specifically of this year.

MR. ROBINSON: Any specific reason for the slippage?

MR. ENG: I would say it's construction related and weather related at this point. We've had some, I guess, reallocation of our piping systems to be delivered on site, and there was a strike in Mexico facilities so we have to find new channels to get those on site as quickly as possible.

MR. ROBINSON: Any problem with setting the risk based analysis?

MR. ENG: That continues independent of the construction activities.
MR. ROBINSON: Okay.

MR. ENG: We do not couple the two. We lead construction actually.

MR. ROBINSON: Okay. Thank you.

CHAIRMAN MORELOCK: So any more questions on Section 1?

(No verbal response.)

CHAIRMAN MORELOCK: All right. We'll let you go through Section 2.

MR. ENG: Okay. Section 2 is a system that we had evaluated already. And what I wanted to present to the members is how we systemized our plant. And this is a typical example of how we do it to determine what equipment are in the RBI process and how these equipment are broken out based on damage mechanism, based on operating conditions, based on commonality of materials of construction.

We do have approximately, I would say, over 100 P&IDs of this type that we would have to systemize and proceed with the RBI process.

If there's no questions on Section 2, we can go to Section 3.

CHAIRMAN MORELOCK: Any questions on Section 2?
(No verbal response.)

CHAIRMAN MORELOCK: I've got some editorials.

MR. ENG: Okay. Those are okay for me to take down.

CHAIRMAN MORELOCK: On page -- it's labeled page 2 of 14 under Section 2, the Policy and Purpose section. In your list, under the second paragraph in Policy and Purpose --

MR. ENG:What page again, please?

CHAIRMAN MORELOCK: It's in Section 2, and then the top of the page, it says page 2 of 14.

MR. ENG: Okay.

CHAIRMAN MORELOCK: And it's titled Section 1, Policy and Purpose.

MR. ENG: Uh-huh.

CHAIRMAN MORELOCK: When you get to the list under the second paragraph, there's some typos that just need to be cleaned up.

MR. ENG: Okay.

CHAIRMAN MORELOCK: It's got maintenance requirements and then it's got "Tenseness D" which I'm assuming to be "Tennessee." And, again, when you get to the
Rules and Regulations Title 68, you want to go
ahead and reference Chapter 122.

MR. ENG: Right. Spell it out.

CHAIRMAN MORELOCK: And then also
reference Rule 0800-03-03 because that's the
regulations.

And I guess my question is, is your
RBI program going to focus solely on the PSM
process and identification of highly hazardous
chemicals, or would you have pressure vessels at
your facility that would not fall under the PSM
guidelines, but it would still fall under
Tennessee Rule and Law based on volume and
pressure where that would -- to not have to be
bound to the two-year internal inspection, you
want to extend that out.

MR. ENG: Our RBI program is not
exclusive to comply only with OSHA PSM.

CHAIRMAN MORELOCK: Okay.

MR. ENG: It's really exclusive to
comply with the State of Tennessee first and
Wacker internal second.

CHAIRMAN MORELOCK: Okay.

MR. ENG: So even though they are
spelled out as separate programs, but they are
combined under the old program. I think that's what you wanted to know.

CHAIRMAN MORELOCK: Yes, that's what I wanted to know.

I just had a general question on page 4 of 14 with the definitions in your mechanical integrity program. Are all these definitions, are they referenced back to a code or a standard, or is this a Wacker definition?

MR. ENG: This is an internal definition.

CHAIRMAN MORELOCK: Okay.

MR. ENG: Or sometimes an industry-driven definition rather than a code definition.

CHAIRMAN MORELOCK: Okay. Then on page 6 of 14, when you're discussing a deficiency, the first bullet says "Operation outside the process design or operating limits as specified by the Process Safety Information." You might want to reference what would permit you to operate outside the process design or operating limits. For example, NBIC Part 3, 3.4.8, would let you return a pressure vessel to service with a known defect, or something like that. To make a
statement like that without having a reference just causes a little bit of alarm, so...

MR. ENG: Okay.

CHAIRMAN MORELOCK: Going on down into "Operating with a deficiency in place," which kind of falls back on the reference I just provided. If you're going to operate with a deficiency in place, again, you may want to be more descriptive on what will permit that, whether that be a API 579 fitness for service assessment or talking with the jurisdiction, and some things like that.

You also discuss "Very minor leaks of PSM-covered materials from process equipment can be exempted from treatment as an MI deficiency if they are completely contained, do not represent an acute toxic health hazard to personnel, nor do they represent a fire explosion hazard."

Again, you may want to detail how approval is reached to operate under that condition, again, with a reference to a code or approval by the jurisdiction.

MR. ENG: There is one item I can add to this. Even though these are pointed out here in a generic form, each and every component
has its own detailed policy to follow up with it.

CHAIRMAN MORELOCK: Okay. And I saw
the reference.

MR. ENG: Yeah. So that's where the
details will come out and we'll capture your
comments on those.

CHAIRMAN MORELOCK: Then you could
just add some editorials here to say per Wacker
procedure.

MR. ENG: Right.

CHAIRMAN MORELOCK: That would be
fantastic.

MR. ENG: Because we wouldn't
naturally operate outside of our parameters.

MR. ROBINSON: In addition to
that -- I had difficulty with that also. And the
reason why was because you had one independent
person who would take a look at the defect, and he
would form an opinion without any subsequent input
from other affected departments or experts on the
equipment.

So what I thought, maybe most
companies, what they'll do, they'll formulate an
MRB board, material review board, for that
particular component. The whole rationale for it
is to identify what could, possibilities, everything. It's your P-FEMA. In this case, one
guy is making the whole decision. One guy.
That's not good.

MR. ENG: If I can follow up with
that. Do you mean that we would have a --
identify a defect and that defect is -- it's
outside of our range, and that person would make
the call whether we're allowed to operate or not?

MR. ROBINSON: Right. Well, in this
case, you used the term "minor leaks." I'm not
trying to go into massive detail. A leak could be
from a loose screw or a loose bolt.

MR. ENG: A gasket or something.

MR. ROBINSON: Or it could be from a
crack, in which case one guy is going to pass
judgment on the leak regardless of where it is,
the actual root cause of it. That doesn't give me
really good comfort.

MR. ENG: Well, it doesn't give me
the same comfort either. But if I can comment on
that?

MR. ROBINSON: Sure.

MR. ENG: You know, a detailed
policy, when these deficiencies are identified in
the field, there is a method to convey that
information within the group setting, the
operations engineer, the operating manager. It's
not by that one person alone.

MR. ROBINSON: Right. And see, I
figured you may have an MRB board, but you didn't
say it.

MR. ENG: Okay.

MR. ROBINSON: So if you say that,
then that will help clear me up.

MR. ENG: Okay. We'll capture that
in the details.

MR. ROBINSON: Yeah. It just said
plan engineer.

MR. ENG: It's usually not the
person that identified the defect that makes the
call. Usually it's more of a team effort.

CHAIRMAN MORELOCK: All right.

MR. ROBINSON: It would be great if
you had a documented process such as a material
review board or something so you could tangibly
put your hand on the documentation to say, "Yes,
we agree" -- or the corrective action -- "we agree
that this is safe to operate."

MR. ENG: Okay. And that's probably
part of the MOC process that we would include as well.

MR. ROBINSON: Very well.

CHAIRMAN MORELOCK: Yeah. MOC process would definitely take care of that.

MR. ENG: That's right. It would capture all of those concerns.

MR. ROBINSON: My apologies.

CHAIRMAN MORELOCK: No, no, no.

That's good. Good comment.

On page 7 of 14, under Good Engineering Practices, and looking through the OSHA requirements, there's a glorious new acronym out there called RAGAGEP, which is "recognized and generally accepted good engineering practice." So I just thought I would throw that in for free.

MR. ENG: That's free, yes. Thanks.

I'll take it.

CHAIRMAN MORELOCK: On page 9 of 14, you're talking about Replacement-in-Kind. And you make the statement in the last sentence of that to state that "Changes involving a replacement-in-kind are not subject to the provisions of the MOC procedure."

And this is not something you need to
fix, but it's just some food for thought. If you are repairing an ASME code-stamped vessel for the NBIC, in 3.3.3 of the NBIC, it says that you can use a material, a different composition that's equal to or stronger than the material you're replacing, and that's considered a repair. But under the MOC process, that would be considered a change. So just think about that.

MR. ENG: Yeah, I understand the path that you're directing. In a situation like that, we would probably need to go through the entire R Stamp Review, more so than just the MOC.

CHAIRMAN MORELOCK: I agree. And I think this might be my last comment. On page 10 of 14, you begin Section 5 with Responsibilities. And it's very well detailed. I like the detail. But for someone who doesn't work at your facility, it would help me to see an organizational chart to see how all of that flows.

MR. ENG: Okay. As you mentioned last time.

CHAIRMAN MORELOCK: Yes.

MR. ENG: No problem.

CHAIRMAN MORELOCK: Okay. And that's all the questions and comments I have on
Section 2.

MR. ENG: Okay.

CHAIRMAN MORELOCK: Any other comments on Section 2?

(No verbal response.)

CHAIRMAN MORELOCK: Okay. I'll let you proceed.

MR. ENG: We talked about the P&ID markups that we used to track and perform our RBI process within the site. Attachment -- if there's no other questions, I'll just continue the process a little bit. Attachment 3 is more detailed information as part of the inspection package that we provide and generate with every piece of equipment that we conduct an RBI assessment on.

It is detailed out in the location of the inspection, the type of inspection, the frequency, the procedures involved, and the skills and certifications of the individuals that conduct these inspections.

And we will use this document as a historical document to get baseline readings and future comparative readings going forward. This is based so we can calculate our corrosion rates and track our damage mechanisms and any other
defects and findings we may find in the inspection reports. And we would have shop joints of this for every component that we have on site.

Any questions on this particular aspect of the RBI process?

(No verbal response.)

MR. ENG: Okay. The next item is a Meridium specific output from an RBI assessment. And this is an example of what we expect from the report, and then we take this and go into the inspection details and generate the inspection package for the field inspectors to follow through.

This is an out-of-the-box report that we get from Meridium. And it's a tool that we have available for us quite similar to, perhaps, PCMS MISTRAS that Valero uses.

Any questions on this particular component on Tab 4?

(No verbal response.)

MR. ENG: So for every piece of equipment that we have on site -- and I think at this point it's around 1,000 -- we would have an independent report generated for that piece of equipment.
And the last item is -- something that you may not have because I didn't have it available at that time -- is a typical inspection report checklist that complies with API 510 in this particular case. And I have copies of it if you wish to see them. If not, I'll just leave them right here on the table.

Again, it's a standard template that's available from the Meridium package, and there's a list of all these inspection reports, API 570, API 653, internal and external. We also have the functionality to generate our own inspection reports that we have been using in Burghauser and Nunchritz for a number of years. So we incorporate those into the software.

This summarizes our inspection tools, capabilities, methodologies, and this is what we are implementing as we speak, and the assessment will continue as we speak.

So if there's any technical questions or any questions at all, I would like to answer them right now.

CHAIRMAN MORELOCK: Any questions of Richard?

(No verbal response.)
CHAIRMAN MORELOCK: Approval of this RBI program would be similar to what Valero just presented and you would make an annual report to the board and --

MR. ENG: More frequent if you wish, but annual for sure.

CHAIRMAN MORELOCK: Okay. All right. Any other questions or comments?

(No verbal response.)

CHAIRMAN MORELOCK: All right. Do I have a motion for this item?

DR. JOHNSON: So moved.

CHAIRMAN MORELOCK: So we're going to move to approve the RBI program with an annual reporting to the Tennessee Board.

And correct me if I'm wrong, Sam. This would also undergo an inspection by the deputy inspector. Would he go out and review this document on site to make sure that what's in the manual is actually what you're doing?

MR. CHAPMAN: That's correct.

CHAIRMAN MORELOCK: So our approval will be contingent on that inspection.

MR. ENG: We think we will be complete with our assessment by the third quarter.
of this year, so we'll come back in December to submit our conclusions and findings.

    MR. ROBINSON: Second.

    CHAIRMAN MORELOCK: All right. Any other questions or comments?

    (No verbal response.)

    CHAIRMAN MORELOCK: All right. I'm going to call the question. All in favor say, "Aye."

    (Affirmative response.)

    CHAIRMAN MORELOCK: Opposed?

    (No verbal response.)

    CHAIRMAN MORELOCK: Abstentions?

    DR. CANONICO: I'm abstaining.

    CHAIRMAN MORELOCK: Okay. One abstention.

    Not voting?

    (No verbal response.)

    CHAIRMAN MORELOCK: Okay.

    Gentlemen, you have an approved RBI.

    MR. ENG: Thank you very much.

    CHAIRMAN MORELOCK: Thank you for your time.

    DR. CANONICO: I apologize for being late. I got caught in that I-24 traffic. The
rain just stops everything. It's terrible.

CHAIRMAN MORELOCK: Okay. We'll move along to our next item which is 15-03. St. Jude Children's Research Hospital is requesting a variance renewal.

So if you will come forward, introduce yourself, we'll get started on that.

And are there any conflicts of interest with this item?

(No verbal response.)

CHAIRMAN MORELOCK: All right. I see no conflicts.

MR. HUBBARD: I'm Rodney Hubbard with MedFac Engineering, and I'm here on behalf of St. Jude. Our firm prepared the original variance request, and our firm updated it for this renewal.

Under the renewal, we've added a fourth boiler that was a part of the original variance request. The building has effectively doubled in size in the past year, and this new boiler was just added for additional capacity and for summer load.

The new boiler is a water tube boiler, 108 horsepower. The existing boilers are fire tube, 300 horsepower, three of them. Also,
as a part of the renewal, we're obligated to bring up anything that's changed.

CHAIRMAN MORELOCK: Yes.

MR. HUBBARD: And I prepared a list of the revisions. The boiler data sheets obviously have changed. We listed Boiler 4 originally but we just said "to be determined" for capacity, for everything, because we were not sure, when the original building was built, what the fourth boiler would be.

The equipment description, Appendix B, it was updated. Appendix C is -- one request that we would like to make is our original boiler information that was conveyed to the remote monitoring location included every single detail that was available in that particular piece of equipment. It was a CB Hawk controller. And we had found that the remote attendant is just overwhelmed with data. And we have condensed that down to about 25 points that we feel are the most pertinent points.

All data is retained and is available to the remote operator, but it is not in the computer, the building automation screen that he views.
CHAIRMAN MORELOCK: So can I ask a quick question?

MR. HUBBARD: Sure.

CHAIRMAN MORELOCK: So those 25 points that are now being monitored, is that what we're seeing on page C-3?

MR. HUBBARD: Yes, sir.

CHAIRMAN MORELOCK: Okay. Because the reason I'm asking is when the deputy inspector goes and does the inspection, he'll want to look at the active fault codes and see if they really work.

MR. HUBBARD: Right. That brings me to my next issue.

CHAIRMAN MORELOCK: Okay.

MR. HUBBARD: I prepared this for the hospital. The hospital reviewed it, and they had me add oxygen monitoring to Boiler 4 with the assumption that 02 trim was a part of Boiler 4. It is not a part of Boiler 4. So we incorporated it, but we do not have a point to monitor. So the hospital recognized they don't have it and they -- we want to delete it. I don't know how to do that.

CHAIRMAN MORELOCK: Well, you can
note that publicly and fix the manual so that when
the inspection is made, it will be removed. And
we're aware that you're seeking to remove that.

MR. HUBBARD: Okay. The piping
diagrams were revised to reflect all of the
changes as a part of the fourth boiler addition.
And, of course, we completed the checklist to show
the most current information.

There really is no fundamental
change. The remote boilers are physically
monitored every four hours during second, third,
weekend shifts. And they're monitored much more
often than that during the first shift. There's
an attendant 24 hours a day, 7 days a week in the
remote location looking at the screens.

CHAIRMAN MORELOCK: Are you ready
for questions?

MR. HUBBARD: Yes, sir.

CHAIRMAN MORELOCK: Okay.

Dr. Canonico?

DR. CANONICO: Maybe I
misunderstand, but under A-1 you have Boiler 4.
It's right after the sketch of the layout of the
facility.

MR. HUBBARD: Yes, sir.
DR. CANONICO: Boiler 4 was built in 2012. Where has it been for the last three years?

MR. HUBBARD: Sitting in its current location.

DR. CANONICO: So it's still a new boiler?

MR. HUBBARD: The boiler has been there. We have not had the approval to remotely operate it. It has been inspected and approved and operated during the day shift when we've had adequate personnel, but there's been no continuous operation of that boiler.

CHAIRMAN MORELOCK: So it's operated under the 20-minute rule, right?

MR. HUBBARD: Oh, yeah. Yes, sir.

DR. CANONICO: Okay. I was just worried that you were bringing in a used boiler or something like that because of the age.

MR. HUBBARD: No. We've been -- the building took three-and-a-half years to construct, so it was a long construction project. And when the tower crane is there is when equipment is lifted into the penthouse.

DR. CANONICO: And the other question I have really doesn't pertain to your
presentation. But I was going to mention to Kim and Dave because one of our interesting topics is the possibility of having boiler operators registered in the state of Tennessee. And there was one in here that said -- page 3 says the operator is qualified to operate the boilers in accordance with the Shelby County boiler operator licensing regulations. Can we get a copy of that exam or whatever it is that they go through?

MS. JEFFERSON: With Shelby County?

DR. CANONICO: Yeah. Because it's something Dave has been looking at, I'm interested in. Most of the boiler operating information that we get is very questionable in my mind as far as boiler operators are concerned. I wonder about their background, their education, things like that. So it would be nice if we could lay our hands on that and maybe, you know, you through your office could do it. But it has nothing to do with you.

CHAIRMAN MORELOCK: Right. Dave Baughman has a discussion item about boiler/operator licensing. So that would benefit that discussion.

MS. JEFFERSON: Okay. Great. We'll
look into it.

DR. CANONICO: Okay. Thank you.

MR. HUBBARD: Southwest Tennessee Technical College routinely has those classes, too.

CHAIRMAN MORELOCK: Any other questions on this variance?

MR. BAUGHMAN: Yes. It says the monitor boilers are tested each day for failure modes, and that the boiler water column is viewed and tested daily for low-water cut-off operation.

How are they testing your low-water cut-off operation? Just describe the procedure.

MR. HUBBARD: They valve off the switch, the float, and they drain it down.

MR. BAUGHMAN: Okay. So they're physically doing a positive check of the low-water cutoff and shutting the burners off?

MR. HUBBARD: Right. Yes, they do. And they check different failure modes. They try not to ever repeat the same test. They test different things all the time.

MR. BAUGHMAN: Okay. But the low water cut-off is tested daily.

MR. HUBBARD: Yes.
MR. BAUGHMAN: Under Emergency Operation, it says, "After the cause of the alarm" -- Emergency Operation, Item C, "After the cause of the alarm has been corrected, the Roving Boiler Attendant shall inform the Central Control Room Boiler Attendant of the cause of the alarm, request the affected boiler shutdown switch be enabled and then restart the affected boiler."

MR. HUBBARD: No. It cannot be. It physically cannot be. It has to be restarted at the boiler. When the rover -- we call them the rover -- when the rover is out there, after he reports to the remote attendant what the cause was, the remote attendant enables the boiler. Then and only then can the rover start the boiler.

CHAIRMAN MORELOCK: On page 2, David. It states in the last sentence on page 2, the roving boiler attendant must start the boiler from its factory control panel at each boiler.

MR. BAUGHMAN: Very good. Thank you.

CHAIRMAN MORELOCK: Any other questions?
MR. BAUGHMAN: Do we have an actual list of those personnel?

MR. HUBBARD: I did not incorporate a list of all of the names of all the licensed boiler operators that they have.

MR. BAUGHMAN: Okay. I'm just interested in turnover, how long these people have been there, what new personnel, you know, the amount of personnel changeover that may occur, and to be able to look at it from one variance to the next to see offhand, but ...

MR. HUBBARD: It's probably at least two a year. There's maybe 25 operators. It's just the age. They're retiring out.

MR. BAUGHMAN: And all the more so of having training available for new personnel to come in.

MR. HUBBARD: Right.

MR. BAUGHMAN: Absolutely. Thank you.

CHAIRMAN MORELOCK: Any other questions?

MR. ROBINSON: Yes, sir. You're going to make changes to the actual setpoints as far as what's reported, 25 setpoints, and remove
the low O2?

MR. HUBBARD: We're only going to --
as far as what this says?

MR. ROBINSON: Yes.

MR. HUBBARD: The O2 in Boiler 4 is
the only item I'm changing.

MR. ROBINSON: Right. I agree. I agree. In addition to that, in the back, your
Appendix I, I believe, you have a copy of the
Tennessee Boiler Rules.

MR. HUBBARD: Yes, sir.

MR. ROBINSON: In my opinion, you
don't have to. It would be wise to take it out.
And the only reason why is because if that's
revised, guess what you have to do to your manual?
You must revise it. My advice would be to use it
as a stand-alone document.

Let me see if I can explain it a
little bit better. In the back, your Appendix I,
you have a complete copy of the Tennessee Boiler
Rules.

MR. HUBBARD: Right.

MR. ROBINSON: We are right now, in
the present, debating on making revisions to this
document. At the bottom of that document, if you
look on your page, you'll see --

MR. HUBBARD: 2008 revised.

MR. ROBINSON: Exactly. If this is approved, you will have an obsolete copy of the boiler rules in your manual, so take it out.

MR. HUBBARD: Okay.

CHAIRMAN MORELOCK: Yeah. You're not required to have a copy of the rules in your manual.

MR. HUBBARD: I did not know that.

CHAIRMAN MORELOCK: I mean, it's nice to have, but Eugene is correct. Any changes that would be made to the rules, then you would have to make a revision to your manual. So you don't need to do that.

MR. HUBBARD: Okay. Then I would request that you allow me to remove Appendix I from this document.

CHAIRMAN MORELOCK: That will be fine.

MR. ROBINSON: That's all I had.

CHAIRMAN MORELOCK: Anything else?

(No verbal response.)

CHAIRMAN MORELOCK: Do I have a motion to approve?
DR. CANONICO: So made.

DR. JOHNSON: Second.

CHAIRMAN MORELOCK: Last call for discussion. I'm going to call the question. All in favor say, "Aye."

(Affirmative response.)

CHAIRMAN MORELOCK: Opposed?

(No verbal response.)

CHAIRMAN MORELOCK: Abstentions, not voting?

(No verbal response.)

CHAIRMAN MORELOCK: You have a renewal.

MR. HUBBARD: Thank you, sir.

CHAIRMAN MORELOCK: Thank you.

MS. JEFFERSON: Mr. Chair, if I may.

CHAIRMAN MORELOCK: Yes.

MS. JEFFERSON: I just wanted to excuse myself from the meeting. I'm going to have to leave now because I have another engagement. But Mr. Finks is going to answer any questions that you-all have on behalf of the Division.

CHAIRMAN MORELOCK: Okay.

MS. JEFFERSON: And I wanted to address Dr. Canonico before I leave. I just
wanted to say I'm not really sure how difficult it's going to be to obtain an exam. I'm not really sure if I'll be able to do that. Will you-all be able to use your curriculum or some other documentation?

DR. CANONICO: Any information I think you can get would be useful. Don't you think, Dave?

MR. BAUGHMAN: Yes. And that information should be available. I don't think we'll have a problem in obtaining it.

MS. JEFFERSON: Great. Well, we'll look into that for you-all. Thank you.

MR. BAUGHMAN: Thank you, Kim.

CHAIRMAN MORELOCK: Thank you.

Our next item is 15-04. W. R. Grace & Company is requesting a modified variance.

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


MR. ALLEN: And I'm Mark Allen, W. R. Grace.

MR. NEVILLE: We're here today to present a modification to the variance that was approved. The main modification here is the
location of the remote station. Previously, when it was approved, we had six remote stations located at control rooms throughout the facility.

And that became an implementation issue, transferring from one remote station to the next and having staffing at each of those stations.

So to simplify things in the site plan, Figure 1 of page 2, we're requesting a change be made and have the main guardhouse be the new remote station. And that will be the one remote station for the facility.

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

(No verbal response.)

CHAIRMAN MORELOCK: Hearing none ... So the change from the location of the remote, that's the modification?

MR. NEVILLE: That's the modification.

CHAIRMAN MORELOCK: Everything else in the manual is --

MR. NEVILLE: Everything else has remained the same.

CHAIRMAN MORELOCK: Okay.

Any questions?
DR. CANONICO: (Indicating.)

CHAIRMAN MORELOCK: Dr. Canonico?

DR. CANONICO: On page 1 you mention one high-pressure boiler under the requirements of Chapter, et cetera. The boiler operates on demand, 24 hours per day, 7 days a week. That means on demand -- I'm having trouble just understanding. But "on demand" means it doesn't run 24/7.

MS. STONE: That's correct. It's only when it's necessary for our process. So we operate our plant 24 hours a day, 7 days a week. But we may not be operating the boiler 24 hours a day, 7 days a week.

DR. CANONICO: So your boilers, then, are cycling.

MS. STONE: Yes. It might run for a week or two and then be shut down for several weeks until we need to get them.

DR. CANONICO: And at what temperature do they cycle? Do you know?

MR. ALLEN: We run on nominal 80, 90PSI.

DR. CANONICO: Temperature?

MR. ALLEN: Temperature is, you
know, 300, plus or minus, Fahrenheit.

DR. CANONICO: You're low enough in temperature you don't have to be concerned with creep or anything, but I just wonder if, cycling it like that, if you had any indication if it would grow. It's just a question.

MR. ALLEN: This is actually a -- I think you guys would term it a steam generator. They're designed to come up and down quickly.

CHAIRMAN MORELOCK: Any other questions?

DR. CANONICO: I had a couple more.

CHAIRMAN MORELOCK: Okay. Go ahead.

DR. CANONICO: Page 5 under Normal Duties, once each shift -- later on when I read this -- I think I read that your boiler attendant will show up at the start of the shift and has to go there at the end of the shift. Is this an additional?

MS. STONE: It's not an additional.

MR. NEVILLE: No, it's not additional.

DR. CANONICO: Then isn't that a misleading statement? Really there are three times each shift, right?
MS. STONE: Right.

DR. CANONICO: When you start the shift, in the middle of the shift, and at the end of the shift.

MS. STONE: Uh-huh.

DR. CANONICO: So really that boiler attendant is there three times.

MR. NEVILLE: Now, are you talking about when he's contacting the remote station, or ...

DR. CANONICO: Yeah.

MR. NEVILLE: Is this under Normal Duties on page 5? Is that what you're referring to? "Once each shift, the boiler attendant will contact the remote station"?

DR. CANONICO: Okay. Yeah. Thanks.

MR. NEVILLE: I believe that's in the alarm. At the beginning of the shift, they're going to contact the remote station and initiate an alarm --

MS. STONE: Right --

MR. NEVILLE: -- to verify that alarms are getting back to the remote station. So that is once a shift.

MS. STONE: Once a shift only.
DR. CANONICO: On page 7, under Training, "Boiler attendant shall be familiarized with the emergency procedures through frequent actuation of the alarm service of the boiler."

What bothers me, is that the only training that that boiler attendant gets?

CHAIRMAN MORELOCK: That's covered in Item 2.

DR. CANONICO: What?

CHAIRMAN MORELOCK: Item 2 covers the rest of the training.

DR. CANONICO: Still not much there in 2.

I guess I'm just -- I have a hangup over boiler attendant training. And I don't see anything here that makes me comfortable.

MR. NEVILLE: I mean, they are trained to this manual.

DR. CANONICO: Excuse me?

MR. NEVILLE: They're trained to this manual. I mean, there's a training that they go through to learn the manual, as far as setting alarms from the boiler, getting -- you know, communicating with remote stations, so that's -- I mean, there's more to it than, I guess, just
line 1.

MS. STONE: They're trained on our operating procedures of the boiler and that's kept in their training records.

MR. ROBINSON: And that's performed by the foreman responsible for the training. And you guys keep a current annual record of the log indicating that person has been trained by the foreman?

MS. STONE: Yes, sir.

CHAIRMAN MORELOCK: G-2 states that the foreman trains the employees on boiler operations.

MR. NEVILLE: Right. And a training log is kept. Appendix H is the documentation of that training.

MR. BAUGHMAN: But on here, Mr. Neville, on Appendix H, there is nobody -- I see the boiler variance training log, but presently there's nobody listed on it. Is that something that --

CHAIRMAN MORELOCK: That's an example.

MR. BAUGHMAN: That's just an example.
MR. NEVILLE: Well, they haven't been trained to this yet. When this is approved, they would be trained to this manual.

MR. BAUGHMAN: I see. So if we implement this today, it would go into effect immediately, but nobody will have been trained already. But that will be enforced once the inspector comes in.

MR. NEVILLE: Right. Right. They'll call for the inspector. He'll show up. You know, at that time the employees will have been trained on those procedures.

MR. BAUGHMAN: And in the meantime, somebody is attending the boiler.

MR. NEVILLE: Absolutely.

CHAIRMAN MORELOCK: Under the current variance.

MR. NEVILLE: Yes.

DR. CANONICO: On page G-1, you have your Leadman Operator duties. I don't see anything in there specifically about experience, education or anything else. Am I missing it?

MR. NEVILLE: We can add the qualifications. What were those?

MS. STONE: We just require a high
school diploma or a GED equivalent.

MR. NEVILLE: For education.

DR. CANONICO: The training always seems loose to me. And this is as loose as any of them, as far as I'm concerned. You know, most of them will say something about at least a high school education or words to that effect. But I don't see anything here that makes me comfortable that he's trained.

MS. STONE: Those are our hiring practices within the organization, but we can add to that.

MR. NEVILLE: We'll add more information to these job descriptions, as far as the educational qualifications.

DR. CANONICO: That's enough for me.

MR. BAUGHMAN: On page 5, Section 2, under Training again, on A, there's a statement that says the shift foreman shall be responsible for training all current and incoming personnel assigned to boiler operations. Instead of just the foreman, it's the shift foreman. And I was a little bit -- I don't quite understand the differentiation between the foreman who has the responsibilities for training and the shift
foreman who has responsibilities for training.

What's the --

MS. STONE: It's the same person.

MR. NEVILLE: It probably should just say "foreman."

CHAIRMAN MORELOCK: Just clarifying your org chart. It's a common thing we see when we review manuals.

Any other questions?

(No verbal response.)

CHAIRMAN MORELOCK: I just have a couple of typos. On the checklist, you state that the cover letter is in Appendix L but it's really Appendix K. And on page 5, the documentation log, it references Appendix I, but it's really Appendix H.

And the only thing I didn't see on the checklist on Item 36, "Does the manual include a test of the following?" And Item B is to test the water column, boiler water column. I don't know that I saw a specific statement in the manual that refers to that, so you may want to add that to those duties that you're going to -- the test that you do once a shift.

And that's all the comments I have.
Anything else?

(No verbal response.)

CHAIRMAN MORELOCK: Do I have a motion to approve this modification?

DR. JOHNSON: I move we approve the modification as noted.

CHAIRMAN MORELOCK: I've got a motion. Do I have a second?

MR. ROBINSON: Second.

CHAIRMAN MORELOCK: Okay. Last call for discussion. Again, this will be contingent on deputy inspector review at your site. Okay. I'm going to call the question. All in favor say, "Aye."

(Affirmative response.)

CHAIRMAN MORELOCK: Opposed?

(No verbal response.)

CHAIRMAN MORELOCK: Abstentions?

DR. CANONICO: (Indicating.)

CHAIRMAN MORELOCK: One abstention. Not voting?

(No verbal response.)

CHAIRMAN MORELOCK: You have an approved modification.

Our next item is 15-05, which is
McKee Foods Corporation requesting a variance.

While we're getting ready to go, are there any conflicts of interest on this item?

(No verbal response.)

CHAIRMAN MORELOCK: All right.

Hearing none, then we're ready to go.

MR. NEVILLE: Again, I'm James Neville with Neville Engineering.

MR. SPENCE: Steve Spence with McKee Foods.

MR. NEVILLE: Today we have -- really all three -- we have a variance request, a modification, because we are taking out three of the boilers. And McKee has three different facilities, and this systems operation manual basically dictates for all those boilers. So we would like a renewal on the variances that we have in place right now since this document is being updated for these new four boilers.

The new boilers are in Plant 2, and they're replacing three boilers that they are taking out of operation.

These high-pressure steam boilers are used for potable hot water, space heating, cooling jackets, and processed heating. They're on demand
24 hours per day, 7 days a week. And the -- in
Appendix A it shows the new boilers in -- that
will be in Plant 2, are the new boilers.

Those four boilers are all steam
generators, one or two steam generators near our
boilers. They're the LX-200 models.

Are there questions regarding this
request?

CHAIRMAN MORELOCK: Questions
regarding this variance?

DR. CANONICO: My first concern, for
whatever it's worth, is on page 2, which I think
is your layout sketch.

MR. NEVILLE: Yes. The site plan?

DR. CANONICO: The distance between
the boilers and the remote station are just -- one
is about a half mile and the other one is almost
eight-tenths of a mile. That's a pretty long
distance if someone gets a notice here and if your
individual you're trying to contact is at the
other end of the plant, he's a mile and a half
away according to the numbers. If I just prorate
it, you're talking about 3960 and 2940.

MR. NEVILLE: 3960, correct.

DR. CANONICO: 2940 is over half a
mile and 3960 is closer to eight-tenths of a mile. That seems like a long way.

MR. NEVILLE: Do you have any comment on the --

MR. SPENCE: Well, I don't have any comment on the distance. But the system, they can call in with their cell phone and enter a pin number, and there is a emergency shutdown relay that will shut down the boiler, essentially, the same as an e-stop would. That's part of our system.

MR. NEVILLE: Right.

DR. CANONICO: Okay. Page 5 under training, "Newly assigned personnel will be required to read and be familiar with these procedures."

That doesn't look like much training to me.

MR. NEVILLE: The facility's maintenance superintendent is responsible for training them to this manual and these procedures. So he signs off on their training, that they are qualified to implement the variance.

DR. CANONICO: I had the same problem with Appendix G, G-3. I don't see
anything here about experience or education. And if you read his boiler operator duties, you get down far enough, you find out that he serves as the boiler attendant. He seems to be relegated to a rather low position. That's all I have.

CHAIRMAN MORELOCK: Okay. Any other comments?

MR. BAUGHMAN: Sure. Starting with Boiler Attendant Procedures, Personnel Type, the Clarification, under Number 1, "The individuals who may perform the function of a boiler attendant are classified by McKee as a 'boiler operator' during occupied hours or a 'security officer, monitor' during unoccupied hours."

Those unoccupied hours bother me some inasmuch as they're-- in other words, clarify to me how many unoccupied hours we have.

MR. SPENCE: It would be sundown Friday to sundown Saturday.

MR. BAUGHMAN: Sundown Friday to sundown Saturday.

CHAIRMAN MORELOCK: And I guess to add to that, when we reviewed this in 2013, you need to keep a product warm, that if you don't have this attendant during those unoccupied hours,
it's going to be a very expensive thing for you to lose that product; is that correct?

MR. SPENCE: That's correct.

CHAIRMAN MORELOCK: So the purpose of the boiler during that time is just to keep that product warm; is that correct?

MR. SPENCE: That's correct.

MR. BAUGHMAN: So that security officer --

MR. NEVILLE: He's monitoring the boiler but he's not operating the boiler. If there was an alarm or any condition like that, the boiler would be shut down and a boiler operator would be called in.

MR. BAUGHMAN: Okay. And the boiler operator is going to be called in from off site?

MR. NEVILLE: Yes.

MR. BAUGHMAN: Okay. Which he could be doing any and everything that --

MR. NEVILLE: Right. I mean, the boiler would be shut down. The remote station would shut down the boiler.

MR. BAUGHMAN: Well, is the security officer at the remote station?

MR. NEVILLE: Yes.
MR. BAUGHMAN: Okay. If there's the standby boiler -- how does the standby boiler go into operation? If a boiler goes down, does the standby boiler start up on its own?

MR. SPENCE: I believe so. With the new system, it's a mirror system and it has those capabilities.

MR. BAUGHMAN: Okay. So it says if the standby boiler is started, the communication system for that boiler shall be tested in accordance with the boiler attendant procedures normal duty. But it's a security officer -- I guess my concern with it is have we got a security officer, singular?

MR. SPENCE: There are several on site.

MR. BAUGHMAN: I guess my concern with it would be if that security officer has other duties ...

MR. SPENCE: There is always a security officer at the security base where the monitoring takes place.

CHAIRMAN MORELOCK: I mean, based on the first sentence on page 5 under remote personnel, regardless of if it's an occupied time
or when the facility is operating, that remote station is continuously staffed by a security officer, correct?

MR. SPENCE: Correct.

CHAIRMAN MORELOCK: And he wouldn't be the only security officer at the facility, right?

MR. NEVILLE: Never.

CHAIRMAN MORELOCK: But your talking about the boiler starting up on its own brought a question to mind. If that boiler comes online on its own and it can't operate for some reason by the remote monitor, then who's going to attend the boiler every 20 minutes until you correct that problem?

MR. NEVILLE: It would be either one of the security officers or they would shut the boiler down.

CHAIRMAN MORELOCK: Okay.

MR. ROBINSON: But technically, the security officer is not the --

MR. SPENCE: There's multiple security officers, though.

CHAIRMAN MORELOCK: It would be one of the other security officers, not the remote
MR. NEVILLE: Yes, correct.

CHAIRMAN MORELOCK: Because they are trained to remote monitor as well as operate the boiler, is that correct, according to your manual?

MR. SPENCE: They would go to the boiler room. Outside the boiler room, we have e-stops. They would press an e-stop for that particular boiler and it would shut down.

MR. ROBINSON: Just for the sake of clarification, the security officer could now operate the boiler?

MR. SPENCE: They can shut it down. They can shut it down from either the security base or from right outside the boiler room.

CHAIRMAN MORELOCK: So if the boiler starts up but it can't be remotely monitored, then the security officer would shut it down.

MR. SPENCE: Correct.

MR. NEVILLE: Yes.

CHAIRMAN MORELOCK: Okay. You might want to clarify that in the manual.

MR. ROBINSON: I have the belief that you don't really want to shut the boiler down if it starts up to save product.
CHAIRMAN MORELOCK: Right.

MR. ROBINSON: So what you need is a contingent plan so that in the event that happens you can continue to run. Because right now you've got a gray spot that's not covered.

CHAIRMAN MORELOCK: Yeah. You'd have to get a boiler operator in within 20 minutes to monitor the boiler. You would have to get an off-site boiler operator in within 20 minutes to operate the boiler.

MR. ROBINSON: In your Appendix G, it led me to it also, because the security officer duties doesn't say anything specifically about monitoring a boiler operation. Nothing.

Now, it does say "when scheduled."

But then on page 5 you said "continuously manned."

MR. NEVILLE: But now, there's multiple security officers, so there will always be a security officer at the base.

MR. ROBINSON: At the monitoring station?

MR. NEVILLE: Yes, at the monitoring station.

MR. ROBINSON: But it doesn't say it.
CHAIRMAN MORELOCK: On page 5 it does.

MR. ROBINSON: Yeah, but in the duties it does not say it.

CHAIRMAN MORELOCK: Right. Right.

MR. ROBINSON: In the duties, it doesn't say that. G-2.

MR. NEVILLE: Right. But would we say it in the duties as far as the -- because this is a position, not -- there's multiple positions.

MR. ROBINSON: Well, you've got -- at the bottom --

MR. NEVILLE: Yes.

MR. ROBINSON: -- it confused me.

What it said was "when scheduled."

MR. NEVILLE: Right. Because there's multiple security officers.

MR. ROBINSON: But then --

MR. NEVILLE: And one of them could be the one that's going to be monitoring the boilers.

MR. ROBINSON: Well, split it up if you have to. Make it certain. Because right now, I didn't know who had it.

CHAIRMAN MORELOCK: But maybe to add
some clarity, Eugene, we asked in 2013 to have the
sentence -- the second sentence was added to Item
2 on page 7. We specifically asked for this as a
board. And it says, "During periods when the
plant is unoccupied, security officers in the
central security office will monitor and respond
to routine and emergency duties and fill out the
log sheet for each operating boiler.

MR. ROBINSON: Okay.

CHAIRMAN MORELOCK: So they're not
operating the boiler. They're monitoring the
boiler or shutting it down, so now --

MR. NEVILLE: That's --

CHAIRMAN MORELOCK: -- going back to
Eugene's --

MR. NEVILLE: And that's an
unoccupied --

CHAIRMAN MORELOCK: Right. But if
you have a situation where your boiler for some
reason shuts down while it's unoccupied, and this
second boiler starts up on its own and the
monitoring system can't operate it properly, I
mean, Eugene has got a point. I don't think you
want to just let it shut down too and lose your
product. So you may want to think about it.
We're not going to tell you what to do. But we're just --

MR. NEVILLE: A contingency.

CHAIRMAN MORELOCK: I mean, you've got -- like you say, you've got a spot there where you have a certain amount of risk of losing that product. So you may want to look at that.

Any other questions?

MR. BAUGHMAN: Well, it's just more of just clarification again. The security officer, the monitor, if the boiler starts up and the boiler attendant -- and this is during unoccupied times -- but the boiler attendant is going to be summoned via cell phone, and like any human being, he or she is going to have other things going on and so can't get there for an hour, 30 minutes, whatever the case may be, or -- and there's multiple people to call. But as we know, cell phones -- my cell phone doesn't always work the way I would anticipate, that I would like it to work.

But my end of it is, is that then that security officer, if that boiler gets started and nobody is available, is going to become a boiler attendant. Somebody is going to have to go
down and look at that boiler, check it out and
what have you.

Boiler attendants will be trained in
boiler operation and monitoring boiler operations,
but they will be trained in boiler operation. I'm
interested in that training. How much training do
these people actually have? And the reason being,
we just experienced some security officers and
went through training with them last week, and it
scared them to death. And so I'm interested in
that aspect of it itself. Because they then
become a boiler attendant that's trained in the
operation. I'm interested to know exactly what
extent do we have them trained.

MR. SPENCE: Well, basically, their
duty is going to be to shut it off, to e-stop it
from either -- from either the remote station at
the security base or to go to the boiler room and
press e-stop. And then they are to continuously
try to get ahold of someone. If they can't get
ahold of someone who actually works on boilers,
then they go up the line of supervision and
superintendents, and expect to get ahold of
someone on the phone in a reasonable amount of
time.
MR. BAUGHMAN: So actually, not really trained in boiler operations but more trained into boiler shutdowns.

MR. NEVILLE: Yes. It's mainly monitoring and shutting down and calling.

CHAIRMAN MORELOCK: I've just got two things. I know this was accidental, but if I flip to the yellow pages, instead of getting emergency procedures, I get the normal daily duties. So you may want to fix your highlighted pages to be 11 and 12 instead of 8 and 9.

MR. NEVILLE: I'll do that.

CHAIRMAN MORELOCK: So that's just a minor thing. That's all.

MR. BAUGHMAN: How many boiler attendants do we have?

MR. SPENCE: I believe there's one per shift.

MR. BAUGHMAN: Okay. And so when one comes up for vacation or two of them come down with the flu bug ...

MR. SPENCE: They have to work extra hours.

CHAIRMAN MORELOCK: And I guess I do have -- again, this is what we see a lot. You've
got the term "boiler operator" and "boiler attendant" used interchangeably in the manual.

You call that "operator" in G and some other places, and then you've got "boiler attendant" --

MR. NEVILLE: Well, boiler operator was the job title that McKee gave to that individual. So, you know, boiler attendant would be that -- could be that security officer at times, unattended. So that's where there's a difference. So I'm not sure how to ...

CHAIRMAN MORELOCK: So when you look at the -- you may want to show that on the organizational chart, that the security officer is the boiler attendant, and then the boiler operator is the boiler operator.

MR. NEVILLE: Okay.

CHAIRMAN MORELOCK: Any other questions?

(No verbal response.)

CHAIRMAN MORELOCK: Do I have a motion on this item?

DR. JOHNSON: I will move to put it on the table.

CHAIRMAN MORELOCK: Okay. So I have a motion to approve with the changes we've
discussed and contingent on the deputy inspector making a visit to the plant site.

Do I have a second?

DR. CANONICO: I'll second.

CHAIRMAN MORELOCK: Okay. So I do have a second. Any more discussion?

(No verbal response.)

CHAIRMAN MORELOCK: Okay. I'm going to call the question. All in favor say, "Aye."

(Affirmative response.)

CHAIRMAN MORELOCK: Opposed?

(No verbal response.)

CHAIRMAN MORELOCK: Abstentions, not voting?

(No verbal response.)

CHAIRMAN MORELOCK: All right, gentlemen, you have a renewed variance.

I have 10:30, so I'm going to give everybody five minutes, and we're going to come back and jump into 15-06, which is Domtar's boiler inspection variance. So let's take about five minutes.

(Recess observed.)

CHAIRMAN MORELOCK: All right. Our next agenda item is 15-06, Domtar Paper Company.
They are requesting a variance for a six-month extension on their annual operating certificate for the Number 2 recovery power boiler located in Kingsport.

So gentlemen, the floor is yours.

Before I say that, is there any conflicts of interest on this item?

(No verbal response.)?

CHAIRMAN MORELOCK: All right.

hearing none, you guys may proceed.

MR. NEVILLE: Again, I'm James Neville, Neville Engineering.

MR. MORRISON: I'm Steve Morrison, power and recovery manager for Domtar Paper Company.

MR. FISH: Gary Fish, Nalco Chemical.

MR. MORRISON: Okay. What we're talking about now is the recovery boiler. It is Tennessee state registration number 34950. It was commissioned in 2002. Operating pressure is 1250 psig, 925 degrees Fahrenheit. Maximum allowable working pressure is 1640. Gage pressure, continuous. Max continuous rate, originally, was 465,000 pounds per hour. It was
modified to increase that to 510,000 per hour.

Kvaerner Pulping with a furnace volume of
54,000 cubic feet and a water volume of
22,666 gallons.

The boiler is located at the Domtar
deficiency in Kingsport, Tennessee. Currently, we
are running the boiler on an annual operating
certificate. That operating certificate started
the operation on November 7th of 2014. We're
looking to extend that out until May 7th of 2016.

CHAIRMAN MORELOCK: Okay.

MR. MORRISON: We've put a program
together to try to address all of the items on the
checklist that was received by the boiler board.
And rather than go through each one of these, I'm
just going to kind of paraphrase each section.
And then if you have any questions, we can delve
into it.

So the first one, the first section,
Section 1, talks about the boiler system,
basically just overview of the boiler and the
history of the boiler, including the support
letter from our insurance company. The insurance
company is in support of allowing the boiler to go
18 months.
The next one is the boiler system.

The boiler system lines out the specifications of the boiler, includes drawings of the boiler, and describes the controls of the boiler with the ABB and DCS. And then we also included some screen shots of the DCS screen to give everybody an idea of what the operator looks at.

And this is a screen where they have a mouse and they can click on each one of the items, the icons, on this screen, and it will bring up the detail on that or they'll bring up the valve. And they can actually operate the valve remotely. If it is a manual valve, then they have an operator that is a field operator that goes out and operates that valve.

They communicate through radios between the field operator and the control room operator, and then we also have a crew lead that is over the entire operation of both boilers. There is another boiler on the other side of the railroad tracks that we operate from the same control room, which is a biomass boiler.

The next section is the boiler records. It includes the inspection report. What I did was I included the last inspection report
that I had available, which was back in 2013 from a company called PSA. They are a company that we've used for multiple years doing these visual inspections as well as the NBE inspection. Since this program was developed, we have gotten the newest report. And I believe you have that available to you also, as the addendum. So this is the --

MR. NEVILLE: Well, not the -- this didn't include the new PSA report.

MR. ROBINSON: It was in the original submittal. It's dated 7/14.

MR. MORRISON: Okay.

MR. ROBINSON: It's an original submittal.

MR. NEVILLE: Yes. But there's been a --

MR. ROBINSON: Another one?

MR. NEVILLE: -- a newer report that has come out since we submitted this.

CHAIRMAN MORELOCK: Even though it's dated 7/14 at the bottom, it's still a 2013 report.

MR. NEVILLE: Right. The date on the bottom is actually the program's date.
MR. ROBINSON: Okay. I see it. I see it. Okay.

MR. NEVILLE: It was requested --

not the date of that report.


MR. MORRISON: But the inspection report -- I'll just summarize it real quick -- it basically said there was no major deficiencies found. There was a lot of little stuff. And as part of our normal procedure during the annual shutdown, a checklist item is developed based on that individual inspection.

And we actually have teams scheduled, and their only job is to work with the visual inspector. So as soon as he identifies something, they're able to react to it and get it taken care of before the inspector can leave so that he can verify that that was actually prepared.

So we try to take care of those checklist items as quickly as possible.

CHAIRMAN MORELOCK: So in that PSA report, all those PL items, those punch list items, they were corrected?
MR. MORRISON: Yes.

CHAIRMAN MORELOCK: Okay. Thank you.

MR. ROBINSON: With the exceptions of the ones that you had to order parts for and were going to push out further, like, the nozzles where you had parts that you had to order for modifications?

MR. MORRISON: It depends on whether or not it's identified as a punch list item that can be corrected right away.

MR. ROBINSON: Okay.

MR. MORRISON: We classify them, but the punch list items are the ones that are actual --

MR. ROBINSON: Fixed.

MR. MORRISON: Yeah. We need to get done right away.

MR. ROBINSON: But do you still have any open items from that last inspection?

MR. MORRISON: Yes, we do.

MR. ROBINSON: Correct. That's the point I wanted to make.

MR. MORRISON: Section 3 is boiler records. So here we talk about any repairs to the
boiler, and we include log sheets and data sheets, and any times that the boiler is out of service. We also included inspection reports, monthly reports that are done.

I'm trying not to inundate you with information, but at the same time, we wanted to provide you with enough information that you wouldn't have a whole lot of questions. You could just refer to the program.

Does anybody have any questions about the boiler records?

MR. ROBINSON: One question. Do you guys also do root-cause analysis?

MR. MORRISON: Yes, we do. Right now we're actually trying to standardize our root-cause analysis with a corporate-wide push to go with one program so that -- because right now we have multiple sites throughout the U.S., and we're all using different types of root-cause analyses, and we're trying to standardize our root-cause analysis by all using the same program. That hasn't been ruled out yet because they're still evaluating. So we do root-cause analysis, but it's not as structured as it's going to be.

MR. ROBINSON: Did you guys find out
what happened to that indication on the pipe on page 16?

MR. MORRISON: On Section 3?

MR. ROBINSON: Yeah. It was just enlarged. Either the pipe buckled or it had a real noticeable crease. You removed it, obviously. But then you had one that actually sprung on you. And I may be getting the two confused.

MR. NEVILLE: Is that 3-16, Section 3?

MR. ROBINSON: Well -- okay. On page -- let's see. This would be report number -- it's page 32. But what had happened, one of the lower loops on the superheater pendant number 21, it actually bowed out. It could have been because of one of the handcuff straps that cracked, but ...

MR. MORRISON: I believe that's what it was. I believe it was one of the --

MR. ROBINSON: It probably sprung the pipe or something.

MR. MORRISON: Yes. One of the clips that hold the tubes in line, typically, we'll see a lot of those that will be destroyed.
We actually went to a new design that allows the tubes to slide and to try to keep those tubes in line. And we've had better success with those.

MR. ROBINSON: And what kind of corrective action did you guys come up with?

MR. MORRISON: We replaced the clip.

MR. ROBINSON: So you put the pipe back in place and then replaced the clip?

MR. MORRISON: That's correct.

MR. ROBINSON: So the springing that's still in the pipe is there.

MR. MORRISON: Yes.

MR. ROBINSON: And on page 16 it had the crease.

MR. NEVILLE: Is that 2-16? Section 2, page 16?

MR. ROBINSON: Yeah, 2-17.

MR. NEVILLE: Oh, 2-17.

MR. MORRISON: This was -- I'm not exactly sure of the history behind this crease, but there was a spot that was identified as questionable. And so they inspected it back in 2010, and we go back to that same spot every year because we know that something happened there, and we inspect it to make sure that there is nothing
that's happening again, that it was just a one

time ...

MR. ROBINSON: So you repaired it?

MR. MORRISON: It was repaired

back -- I believe it was 2010, and then we just
keep going back there and reviewing that same spot
to make sure that we don't have any propagation of
any mechanism that had metal loss.

MR. ROBINSON: Okay. Back to Number
32, where the pipe was actually sprung, you didn't
have to do an R stamp on that because it was just
a handcuff and not a pressure boundary item.

MR. MORRISON: That's correct.

CHAIRMAN MORELOCK: So is your
question, "Was the mechanism that caused the
failure mitigated?"

MR. ROBINSON: Right. In reality --

CHAIRMAN MORELOCK: Or is it going
to break it again?

MR. MORRISON: It possibly could
break again. It's just a handcuff. We try to use
these handcuffs to try to keep the tubes in line
as they expand and grow. And as you walk up into
the boiler and look up into the boiler, you can
see the tubes wave back and forth. This just
happened to be one that seemed to be like it was
more pronounced than others, so they brought that
to our attention.

MR. ROBINSON: Now, this came up in
the last 2013 inspection, right?

MR. MORRISON: 2013, that's correct.

MR. ROBINSON: Okay. And you're now
scheduled for your next internal approximately
18 months from that period of time?

MR. MORRISON: No.

MR. ROBINSON: May?

MR. MORRISON: It was from November
7th, 2014, was our last inspection.

MR. ROBINSON: Okay.

MR. MORRISON: I didn't bring the
individual inspection for this. I did bring the
NDE inspection report.

MR. ROBINSON: Okay. Did you take a
look at this area again?

MR. MORRISON: I can't answer that.
I mean, it's -- I don't remember the specifics on
that report, on that particular item.

MR. ROBINSON: Okay.

MR. BAUGHMAN: I would like to see
it.
MR. ROBINSON: Yeah. It would be --
whenever I've seen a sprung pipe like this, the
solution to mitigate -- that pipe is under load --
you cut it out and you replace it. That's what
I've seen. Now, perhaps Brian has seen different
things, but I've only seen where if a pipe is
under that much load, I've seen where under load
conditions the pipe will actually move several
feet. But it's calculated.

This is unusual based on what I'm
seeing throughout the rest of the boiler. That's
why I question it.

MR. MORRISON: Yeah, and it may have
been presented that it's unusual. But, again, if
you look up into the superheater section, there is
a lot of deformation.

So the boiler tubes are deformed.
You know, the superheater tubes do deform here,
especially when you go in and, you know, look up.
And this just happened to be a little bit more
pronounced.

MR. ROBINSON: This would just be
one spot.

MR. MORRISON: Yeah. This one
happened to be more pronounced than the others.
MR. ROBINSON: Okay. I would be interested to know what the numbers were for this particular item again.

MR. MORRISON: I can find out.

MR. ROBINSON: Please?

MR. MORRISON: So going back to boiler records, Section 3, does anybody have any questions on Section 3?

(No verbal response.)

MR. MORRISON: All right. We'll go on to Section 4, Section 4 being a boiler water treatment system. And so we've got a synopsis of the water treatment control system here and how we operate, our coordinated phosphate program. It's pretty straightforward. Does anybody have any questions about that? And if you do, I brought somebody along who can answer it.

CHAIRMAN MORELOCK: I guess the only comment I have is when we take our renewal for our commissions, we have questions about this. And so NB410 from the national board has guidelines on what your pH and all of that ought to be. And so is your water treatment program kind of going along with the guidelines in NB410?

MR. MORRISON: I'm not sure what
NB410 is.

CHAIRMAN MORELOCK: It's a national board publication code on your water, boiler feed water, and things like that -- it's not a -- it's not a code or a -- it's a guideline. So you just might want to -- you can go out to the national board web site and find it, so it's -- it might provide you some good information.

MR. NEVILLE: That's NB410?

CHAIRMAN MORELOCK: Yes.

MR. MORRISON: Okay. The next section is the Boiler Water Treatment System Records. So here we talk about the log -- it shows the log sheets where the pH conductivity is logged, and we also have monthly reports from our chemical supplier that shows -- we call it the percent in the box, and any issues or concerns with the water chemistry system for the past month. And that happens every month.

Does anybody have any questions on Section 5?

MR. BAUGHMAN: Gary?

MR. FISH: Yes.

MR. BAUGHMAN: How long have you been involved there?
MR. FISH: About 18 months. In June I'll have been there two years.

MR. BAUGHMAN: Okay.

MR. MORRISON: Next is Section 6.

This is the boiler and boiler water treatment maintenance system. We currently use a computer maintenance management system, SAP, so all the work orders are identified through notifications in SAP. A maintenance coordinator reviews the notifications, and if they are legitimate items that we decide to work on, then he converts them to a work order and then schedules them through planning. And I -- rather than, you know, create a book this big (indicating), because there's hundreds of work orders written each day, I just went ahead and printed a small sample.

MR. NEVILLE: In the addendum we also list -- and there's a full page, and I believe this starts the beginning of the year, so ...

CHAIRMAN MORELOCK: That makes sense.

MR. MORRISON: And this is just the boiler.

MR. NEVILLE: This is the water
treatment system here.

MR. MORRISON: And also in this section we included the R2 forms for the modification of the boiler for increasing the steaming rate.

Does anybody have any questions about the maintenance of the boiler and boiler water treatment system?

(No verbal response.)

MR. MORRISON: All right. Next section, Section 7, is the Pressure Vessel and Tank Inspection Program. We have a separate program for managing our pressure vessels. We grade our pressure vessels, do a risk assessment on it and give it a category, and then based on the chart, where it lands in the chart, that determines our frequency of inspection.

This is something that is being rolled out corporate-wide through Domtar. And we're basically the best in Domtar at managing this.

CHAIRMAN MORELOCK: So will the pressure vessel side, will that eventually -- will you be coming to the State and to the board seeking to extend your inspection frequency on
your pressure vessels?

MR. MORRISON: Not at this time, because the boiler being a pressure vessel is classified as a critical P1, and the interval inspection is one to two years, so we're still within that range. So the classification of the boiler won't change. It's just we're going to use 18 months instead of 12 months.

CHAIRMAN MORELOCK: Okay.

MR. MORRISON: But that was definitely something that we looked at during the annual shutdown last year, to look at any pressure vessels that were due for 2015 that would have to be taken offline to have inspected. And so we inspected those in 2015 to restart the clock on those pressure vessels.

Any questions about the Pressure Vessel and Tank Inspection Program?

(No verbal response.)

MR. MORRISON: The next is Position Descriptions. And here we talk about the operators, what their job duties are and where they fit into the organization. We also included the operator certification document. It covers what's expected of a boiler operator and what they
have to do to not only be qualified but to stay qualified. There is renewal certifications that they have to go through. So every three years they have to retest.

And we did this for -- we call it the first assistant, which is the operator that sits at the panel. I did not include the third assistant, which is the rover, the one that goes out and operates the valves, but --

MR. NEVILLE: They're in the addendum.

MR. MORRISON: -- we did include them in the addendum.

MR. NEVILLE: The third assistant is in the addendum.

MR. MORRISON: And then we included, in this same section, the request letter and kind of went through the check list and tried to make sure that we hit all the items.

Does anybody have any questions about the position descriptions?

CHAIRMAN MORELOCK: Any questions?

DR. CANONICO: Have you ever had a failure that resulted in an injury?

MR. MORRISON: Well, I've only been
there about as long as Gary, so I've been there
just about two years. We have had injuries, but
most of it is not pressure-part related. We did
have, I believe, a chemical burn. We burn the
liquor and it's 290 degrees. It's a very high pH,
so it's caustic. We have PPE that we wear, but it
doesn't quite cover every spot, and so we've had
people who have gotten burned and stuff like that,
but no major incidents in the boiler house. We
had one real close call in 2013. It was not -- it
was in the utilities department. It wasn't quite
part of this boiler, but in the hog fuel conveyor,
feeding the hog fuel boiler, an operator got
caught up in the conveyor. Luckily he hit an
I-beam and that stopped him from going in and he
only broke a couple of ribs. But if he would have
gotten onto the conveyor, it could have been a
fatality. It most assuredly would have been a
fatality.

DR. CANONICO: So what you're asking
for now is to extend the inspection period?

MR. MORRISON: Yes, sir. The
internal inspection period. We'll still continue
to do the external inspections and all the
inspections that can be done.
DR. CANONICO: You have a very dangerous combination of your liquor and if water or steam gets in there.

MR. MORRISON: Yes, sir, we do. The smelt reaction. And we will continue to do small shutdowns. So every quarter we do shut the boiler down and do maintenance and repairs. In fact, this month, the 25th, we have a scheduled shutdown. And we're actually going to be going in and working -- we'll work on the liquor system. We'll be cleaning the liquor system. We'll be actually putting on a new superheater safety to increase the capacity.

So we'll be doing some maintenance on the boiler during these annual shutdowns -- or on these quarterly shutdowns. We just won't be going in and doing the internal inspection every 12 months. We're just asking to extend that out to 18 months.

MR. BAUGHMAN: So do I understand you that the boiler is shut down quarterly?

MR. MORRISON: It is quarterly, yes.

MR. BAUGHMAN: Okay. Is there -- and I would really have liked it if we had seen the report or had access to have taken a look at
the last findings. It would have been great to look at. But I'm interested, is there anything that's on the reports here from PSA, September 24 of 2013, any of the recommendations that have not been accomplished?

MR. MORRISON: I would have to check with the boiler engineer to find out. His responsibility is to follow up on these items.

MR. BAUGHMAN: In particular, the recommendation says plan to remove the smelt bed in its entirety during the 2015 outage. Last done in 2010.

MR. MORRISON: I can answer that one. We did do that. What happens is we have a bed of smelt down at the floor, and during a normal shutdown, you just allow the smelt to solidify and you do the boiler inspection. Well, the floor itself underneath that smelt is not inspected except every five years. Well, it was coming up in 2015. We knew that we were going to be asking for this extension, so in 2014, back in October, we went ahead and pulled all of the smelt out and went ahead and did a full inspection on the floor.

MR. BAUGHMAN: That's the kind of
thing that I would like to see, is just

documentation of what recommendations were made

versus what actually had been accomplished just so

there's no questions in anybody's minds. The

accountability versus the liability.

CHAIRMAN MORELOCK: Any other

questions?

(No verbal response.)

CHAIRMAN MORELOCK: I've got some

editorial things. If you -- the back page of your

table of contents is upside down.

On page 8 in Section -- well, it's

actually before Section 1, you've got this top

paragraph called Concern 2 in which you're talking

about damage mechanisms.

MR. MORRISON: Yes.

CHAIRMAN MORELOCK: And then you've

got a space, and it says "Since mass flow is

constant," colon, zero.

Is there an equation that's supposed
to be there, or is there something -- it almost to

me looked like there was going to be an equation

showing the relationship between mass flow and

velocity and reduced cross-sectional area and all

of that, so ...
MR. MORRISON: I believe that zero
and that point should just not be in there.

CHAIRMAN MORELOCK: Okay.

MR. MORRISON: I believe that "Since
mass flow is constant," and then the next
sentence --

CHAIRMAN MORELOCK: Okay.

MR. NEVILLE: We'll remove that.

CHAIRMAN MORELOCK: Yeah. You just
may want to fix that.

On page 9, I have not -- and it may
be in here and I've just missed it, but I do not
see a spelled-out definition of the acronym BFB,
in the third paragraph.

MR. MORRISON: Okay. Yeah, I think
I did.

CHAIRMAN MORELOCK: And if it's
there, that's fine. I may have missed it.

MR. MORRISON: No. I believe what
happened, sir, is we included the BFB in the
original writeup, and I did spell it out in those
pages, but those pages were removed.

CHAIRMAN MORELOCK: Okay. You may
want to spell that out, the first time at least.

And within that same paragraph, it
goes on to say that the analysis is then presented as Attachment E. So we didn't know how to find that.

And at the end of that paragraph, the next-to-the-last sentence states, "Domtar believes with a high confidence that this magnetite layer can be maintained whether the boilers are inspected every 12 months or every 18 months," which builds your case for the 18-month extension.

But also, does that tie you to a maximum of 18 months?

MR. MORRISON: Seems to.

CHAIRMAN MORELOCK: Yeah.

MR. MORRISON: Maybe beyond 12 months.

CHAIRMAN MORELOCK: Yeah. And you also mentioned a heat-up and cool-down curve as how you control thermal stresses, which I know Dr. Canonico loves to talk about. So he might like to see that heat-up and cool-down curve.

MR. MORRISON: We have those in the procedure. They actually are -- they graph that as they're doing the heat-up and cool-down so that they stay underneath that curve.

CHAIRMAN MORELOCK: And as far as
your RBI, I read through the couple of
calculations and followed most of it, but what
methodology are you implementing for your program?
Are you using a software or are you -- where are
you getting your RBI methodology from?

MR. MORRISON: This was developed by
corporate engineering at Domtar.

CHAIRMAN MORELOCK: And the reason
I'm asking, I mean, there's companies out there
like Aptech and Meridium and others that provide
the software to do that, but --

MR. MORRISON: We have no software.

CHAIRMAN MORELOCK: Okay. So it's
all internal corporate, right?

MR. MORRISON: Yes, it is. Well,
what happens is we sit down once a year and we
grade our tanks with the engineering manager, the
area engineer, and the operation operating
ingineer, and then go through the vessels within
those areas and then grade each one.

CHAIRMAN MORELOCK: Okay. As you
just saw from Wacker's report, you know, you're
going to be bound to recommended and good
engineering practice, that new OSHA acronym. So
you may want to add a little more information to
that to show that your RBI does satisfy that part
of the OSHA requirement, as well as PSM, too.

And that's the only comments I had.

Any other questions?

DR. CANONICO: On page 1.10, you
talk about your boiler system. And your 62-2000,
you're operating at 900 degrees. Am I reading
that correctly?

MR. MORRISON: I'm sorry. Where are
you at now?

DR. CANONICO: 1.10.

MR. MORRISON: 900 degrees
Fahrenheit. 925 I thought. Yeah, that should be
925 degrees.

DR. CANONICO: Same thing. What
kind of material is that boiler made of? Do you
know?

MR. MORRISON: Yes. In fact, you
asked me last time. And I believe it's an SA120.
I mean, there's multiple areas, but most of the
boiler is -- it's carbon steel. I'll say 120 is
the --

DR. CANONICO: You're up in the
creep range. Do you cycle this unit?

MR. MORRISON: We try not to at all.
This is our baseline boiler, and the hog boiler is the one that swings.

DR. CANONICO: Once you go above 750, roughly, most carbon steels will start to creep.

MR. MORRISON: We watch real closely the two temperatures. We actually have thermocouples on all of our superheater 2s.

DR. CANONICO: Are you measuring any change in diameter or growth?

MR. MORRISON: We don't. We just monitor for the temperature. And then every year -- we started instituting this -- we've taken a scav sample. So we've gone down to the furnace area and cut out a tube and had it analyzed. And one of the analyses, I believe, is creep, and we just did that for the other boiler also, because it operates at the same pressure and temperature.

DR. CANONICO: Yeah. Once you go above 750, I like to add a little goodies to it, like, one-and-a-quarter Chrome, half Moly -- two-and-quarter Chrome might be too much. But one and a quarter would be useful.

MR. MORRISON: Well, the temperature, you know, the 900, 925 degrees,
that's the steam outlet temperature. And the
tubes in the superheater are made of different
metallurgy than just straight carbon steel. I do
know that they are different. And I believe in
the addendum inspection report it shows the
metallurgy for the different components within the
boiler. But for the most part, with operating at
1250 psi, I believe the saturation temperature is
750 degrees. And that's --

DR. CANONICO: 750 should be okay.

MR. MORRISON: That's where the --

DR. CANONICO: Then you've gone --

we've had failures that look like creep failures
at 750 if you've got a lot of residual junk in the
seal.

MR. MORRISON: Yeah. I'm trying to
remember what we have for those. I have those
listed --

MR. NEVILLE: It's in the PSI
inspection report.

DR. CANONICO: Do you have the
analysis in the addendum?

MR. MORRISON: No, I guess I don't.

But I do have the NDE inspection report, and I
believe it has it. If you can give me just a
second. This (indicating) is why I didn't want to
put it in the program.

DR. CANONICO: The only reason I
mention it is for your own good. And of course
our only concern is safety. But for your own
good, you might want to be sure that you're not
running into any creep damage. But if you're
operating at 750 with the carbon steel, you should
be okay.

MR. MORRISON: Yeah, and it's -- so
the material for the majority of the boiler is
SA-210-A1. The superheater loops are 213-T11 --

DR. CANONICO: Okay. That's good.

MR. MORRISON: -- T22 and then
209 T1, 210 A1. And so there's different
metallurgy for the different superheaters.

But I appreciate the comment, and we
recognize that creep is a concern. And we're
going to continue to do the scav samples and have
the tubes analyzed. It allows us to also do
verification on our NDE instrumentation and it
gives us an idea of the magnetite layer right
there at the furnace. We strategically picked
that spot. And it also allows us a spot to bore a
scope down through the tubes.
CHAIRMAN MORELOCK: Any other questions or comments?

MR. BAUGHMAN: Have you ever had a leak in the superheater economizer?

MR. MORRISON: I was told that we never had a leak. I went back and looked at the reports. We did have a leak during a hydro, but it was identified during the hydrostatic test, and it was repaired before the boiler was put back online.

DR. CANONICO: But it hadn't been in service yet.

MR. MORRISON: It had not been in service yet.

DR. CANONICO: That's when they're supposed to leak.

MR. BAUGHMAN: Somewhere in here, Steve, I read that there was mostly routine items that were found during an inspection. And the "mostly" just kind of stands out to me a little bit. And in the absence of the boiler -- last boiler inspection report, which this one is very thorough from 2013 -- but I've just got a little -- I've got some reservations. I'm not holding 2014s for any analysis. And so we're
basing information off of a previous. And I would really like to have a copy of the newest inspection report.

MR. MORRISON: I can get one tomorrow. I'm sorry.

MR. BAUGHMAN: Yeah, I understand.

CHAIRMAN MORELOCK: Any other --

MR. BAUGHMAN: There again, that item about "mostly," I don't know what else -- I don't know what is -- I don't know what's included in that to be able to analyze it, so I'm relying upon verbal communication here to extrapolate that information.

MR. MORRISON: Are you wondering about the scope of the inspection or the inspection results itself?

MR. BAUGHMAN: The inspection results itself.

MR. MORRISON: Because I can speak about the scope of the results.

MR. BAUGHMAN: No. It's the results.

MR. MORRISON: And I can tell you, as the power recovery manager, if there was a big problem, they would be coming to me right away.
But there's -- typically we have the utilities engineer, and he runs the inspection and nothing was terrible, nothing that couldn't be taken care of that would prevent us from starting or continuing to run.

And the inspection company was given the information that we were going to be going 18 months, so we told them to expect it like it's going to go 18 months. That way if we do get approval from the boiler board, then we're okay.

MR. BAUGHMAN: Sure. Why was that document not able to be produced to us for this meeting?

MR. MORRISON: I didn't bring it with me. It's my fault.

CHAIRMAN MORELOCK: Well, we can always make that document part of the contingent approval, so it's not a done deal.

MR. BAUGHMAN: That's what I would like.

MR. MORRISON: Yeah. I didn't think the inspection report, the visual, was as important as the NDE, so I brought the NDE reports. I didn't bring the visual.

MR. ROBINSON: If I recall
correctly, the last report you submitted had,
also, the macros.

MR. MORRISON: I'm sorry?

MR. ROBINSON: The last report, the
last time you came to see us, you had included the
macros. They were a part of the inspection
report.

MR. MORRISON: Macros?

MR. ROBINSON: The surface
replications for the cut-away sections.

MR. MORRISON: Oh, yes, sir. And
you're talking about the scav --

MR. ROBINSON: Yes, sir.

MR. MORRISON: Now, we did have a --
the water company also does the inspection. We
have three people that really are responsible --
three organizations that are responsible for doing
inspections on the boiler. We contract out a
company to do the inspection as a representative
of Domtar. We have the water chemistry company
does the inspection to verify that their water
chemistry is working and that there's no problems
with that. And then we also have the insurance
inspector, and he comes in and inspects also,
so ...
What I did bring is I brought the inspection from the insurance company and the inspection from the water treatment company. I just didn't bring the other ...

And so if you'd like to see that, it does talk about the -- I believe the --

MR. FISH: Gives the DWD and all that information there. It shows the internal inspection. We do a thorough internal inspection because we're most concerned about the chemistry treatment, so we don't go into the detail that the other inspection would do on the external portions as much.

MR. MORRISON: Right there, the lower furnace, too.

MR. FISH: That's correct. So here's the inspection report for that piece that was --

MR. ROBINSON: Scav piece, okay. Very well.

MR. BAUGHMAN: Steve, Nalco has been there two years.

MR. MORRISON: Almost.

MR. BAUGHMAN: Okay. And --

MR. FISH: Well, let me just
clarify. We started treating the boilers, I believe, probably in April or May of 2014.

MR. BAUGHMAN: Okay. So very recently.

MR. FISH: Correct.

MR. BAUGHMAN: Okay. The results -- I mean, the previous company -- I'm just kind of wondering why the change offhand, if it was -- since the previous results had been satisfactory, I hope.

MR. MORRISON: They were good. The problem was that there was a corporate initiative to do single-sourcing strategy with water treatment companies. And the water treatment company that we were using was not one of the choices.

MR. BAUGHMAN: That's always a fun thing for you guys to deal with. I was just curious to that. Thank you.

CHAIRMAN MORELOCK: Any other questions or comments.

MR. ROBINSON: No, sir.

CHAIRMAN MORELOCK: Okay. So just to kind of recap what we're doing here, Domtar is seeking approval to extend their boiler internal
inspection frequency from 12 months to 18 months
per the recently passed legislation last year that
added paragraph F to 68-122-110.

Also, in their manual, they've made
it also clear that within that 18-month period,
this recovery boiler will be inspected externally
every six months. And if this inspection shows
any potential problems, leakage or whatever it may
be the inspector finds, then the boiler will be
shut down for an internal inspection and this
variance would be rescinded. So that's what we're
voting on today, is to approve this manual.

I think you've done an excellent job.
It's a very detailed manual. It's very thorough.
It took a lot of time, I know, to put all that
together. So I thank you for all the effort
that's gone into that. So I think you've done a
great job.

MR. MORRISON: Thank you.

CHAIRMAN MORELOCK: So with saying
all that, approval of this program obviously would
be contingent upon an inspection by the deputy
inspector, and it would also be contingent on
Mr. Baughman's concerns as far as review of the
reports.
Would it be satisfactory -- do you want the board to review those reports, or do you want the deputy inspector to review those reports?

Both of us?

MR. BAUGHMAN: Well, I think the more people that put eyes on it to identify it, the better it would be.

CHAIRMAN MORELOCK: Okay. So the board and the deputy inspector would review that latest November 2014 inspection. And I think that's it.

So do I have a motion to approve this.

DR. CANONICO: Motion.

MR. ROBINSON: Second.

CHAIRMAN MORELOCK: Okay. I've got a motion and a second.

MR. BAUGHMAN: I'm just going to ask one more quick question.

CHAIRMAN MORELOCK: Sure.

MR. BAUGHMAN: The inspection was actually in September; is that correct? Or when was the inspection performed?

MR. MORRISON: Which inspection are you --
MR. BAUGHMAN: The last inspection was performed --

MR. MORRISON: In October of 2014.

MR. BAUGHMAN: -- in October 2014, so this is going to be looking for an extension, but it was -- the new certificate was issued November 7th; is that correct?

MR. MORRISON: Yes.

MR. BAUGHMAN: Okay.

MR. MORRISON: That's when the boiler started back up.

MR. BAUGHMAN: Okay. So I was just trying to clarify the dates just offhand just for my own records. So the renewal is going to come up, due presently --

MR. MORRISON: May 7th is what I calculated.

MR. BAUGHMAN: Well, for the extension renewal. But otherwise, the standard renewal would be scheduled when?

MR. MORRISON: November 7th, 2015.

MR. BAUGHMAN: Okay. Thank you.

MR. MORRISON: And I believe there's a two-month grace period associated with that.

CHAIRMAN MORELOCK: Okay. I've got
a motion and second. Any more discussion or
questions?

MR. ROBINSON: Question,

Mr. Chairman.

CHAIRMAN MORELOCK: Yes, sir.

MR. ROBINSON: The best mechanism to
deliver the copy of the last inspection report,
would it be just to hand it to the acting chief,
or perhaps disseminate it through an email.

CHAIRMAN MORELOCK: I think for the
sake of recordkeeping by the State, if the State
can receive it, they can date stamp it, and then
they can send us a PDF of that for review. Would
that be acceptable, some sort of electronic
format?

MR. MORRISON: Send it to

Mr. Chapman?

CHAIRMAN MORELOCK: So send it to

Mr. Chapman. That way he can have a date stamp on
it and it will go into the records. And that
would be better than us getting it in a nebulous
e-mail.

MR. NEVILLE: Does he need a

physical copy or can I send it digital?

MR. ROBINSON: PDF.
CHAIRMAN MORELOCK: PDF will be fine. If you want to send it to him as well, he can date stamp that as well. Okay.

Any other comments or questions?

(No verbal response.)

CHAIRMAN MORELOCK: All right. I'm going to call the question. All in favor say, "Aye."

(Affirmative response.)

CHAIRMAN MORELOCK: Opposed?

(No verbal response.)

CHAIRMAN MORELOCK: Abstentions, not voting?

(No verbal response.)

CHAIRMAN MORELOCK: Congratulations. You have the first boiler variance, unless there's something in the inspection report.

MR. MORRISON: Thank you, sir.

CHAIRMAN MORELOCK: Okay. Our next item is 15-07, U.S. Nitrogen. They're requesting an attendant variance.

Are there any conflicts of interest with this item?

(No verbal response.)

CHAIRMAN MORELOCK: All right. I
hear none.

Gentlemen, you may proceed.

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


MR. NEVILLE: I'll have Mr. Moon briefly describe the company and their operation of the four boilers. I would like to hand out -- I do have the new TN numbers for three of the boilers. One of them, they do not have a TN number for, so we will not be asking at this meeting for that as a part of this variance.

This will just be National Board Numbers 29, 30, and 31. Those are the three boilers that -- in Appendix -- and I do have an updated Appendix A I would like to hand out.

CHAIRMAN MORELOCK: So we're amending this to three boilers instead of four?

MR. NEVILLE: That is correct. And that's -- we will be back as far as when they do receive TN numbers for that boiler. But at this time, they do not have it.
MR. MOON: So it's a Greeneville facility. We will be engaged in the production of ammonium nitrate for industrial use as a component to explosive for Austin Powder's.

THE REPORTER: I'm sorry. I can't hear you.

MR. MOON: Am I not talking loud enough? I'm very sorry.

Industrial facility engaged in the production of ammonium nitrate for Austin Powder's for explosives. The 85,000-pound boiler is for the use of auxiliary steam. The two 35,000-pound boilers are waste heat boilers. They'll be involved in our ammonia plants for the methane reformers.

The facility is not currently in operation. Our expectation is that we may see the auxiliary boiler in operation as early as two months, and the waste heat boilers sometime this summer for the ammonia plants, the two 35,000-pound units.

As far as our operators, we've had them on staff for about a year and have done as much training as we possibly can without having operating units to train them in, including -- we
brought a gentleman down from Illinois who
actually, literally wrote a book on boilers to do
boiler training with them.

And in addition, we'll have -- when we
have the procedures completely developed, they'll
be required to understand those procedures, be
able to verify knowledge, and then to be annually
certified after that. We are a process safety
management facility, in addition.

CHAIRMAN MORELOCK: So the annual
certification will be an internal process for your
company?

MR. MOON: Yes, sir. I've never
done this before, so I don't know much more what
to say.

CHAIRMAN MORELOCK: If you're ready
for questions ... 

MR. MOON: Yes.

CHAIRMAN MORELOCK: All right. Just
to start it off, again, these are just editorial,
but on page 1 it's stated that Randall Harris will
be responsible for the implementation of this
variance. In Appendix K, it states that you,
Marty, will be responsible for implementation of
the variance and keeping the manual updated. So
you may just want to clarify who it really is.

Honestly, when I get into A, B, and C, there's a lot of information in here. And it's good. I'm not knocking that aspect of it, but for someone to take your manual and to go and readily see what alarm codes need to be monitored and how it actually works, it needs a little more detail as far as -- the volume of information is great, but we need some concise descriptions like we typically see as to what the alarm codes are and things that are auditable by the deputy inspector when he visits your facility.

MR. MOON: Okay.

MR. BAUGHMAN: It's totally lacking.

CHAIRMAN MORELOCK: Also, on line 20 of the checklist, it asks if the remote monitoring system can prevent unauthorized access. And I just didn't see anywhere where that was clearly stated in the manual.

In Appendix G, for the job description for the operating shift supervisor, I don't see within his duties as being a boiler attendant. There's no verbiage pertaining to that. And you've already addressed my concern about no TN numbers for the boilers. So that's
the extent of my comments.

MR. NEVILLE: As far as those alarm codes, we can add those.

CHAIRMAN MORELOCK: I mean, like I said, the information is fantastic. I'm not knocking that, but you need, like, cover pages in there where someone can get a quick picture of, you know, what you are monitoring, what the alarm codes are, what the fault codes are, how you protect it from unauthorized access.

Any other questions or comments?

DR. CANONICO: (Indicating.)

CHAIRMAN MORELOCK: Dr. Canonico?

DR. CANONICO: On page 1 you state that this facility is currently under construction. On your boiler data sheet, the fourth one in line has a date built of 1987, slash, 1973.

MR. MOON: Yeah, that's correct.

DR. CANONICO: Where have those boilers been all this time?

MR. MOON: That particular one, we purchased it in Louisiana and brought it up here to be refurbished and reused at our site. It was actually kind of a victim of Hurricane Katrina.
The facility that was next to it that supplied it ammonia was taken out by the hurricane and they decided not to restart it. So we purchased the facility and brought it up here to use here. That's why that boiler has an older date to it. It is still not currently in operation right now.

DR. CANONICO: Now, is that a used unit?

MR. MOON: Used unit but refurbished.

DR. CANONICO: Excuse me?

MR. MOON: Retubed. Used unit but it's retubed.

DR. CANONICO: And I think my other question on that page, page 1, the young lady earlier answered it and it probably is the same, "Operated on demand 24 hours per day, 7 days per week." So it's not steady operation.

MR. MOON: Oh, it's certainly steady operation. Yeah, absolutely.

DR. CANONICO: We have two different definitions of "demand."

CHAIRMAN MORELOCK: Well, you're wanting it to say "continuous operation"? Is that what you're wanting it to say?
DR. CANONICO: I don't care what he says, but I've got two definitions now.

MR. MOON: It's a continuous process. For instance, the ammonia plants, those two 35,000-pound waste heat boilers, our hope is they'll be in continuous operation for 18 months at a time.

The auxiliary boiler, we will use it as needed, but it will be required to be, at the very least, idled continuously. We can't not have it running.

DR. CANONICO: I would be inclined to remove the word "on demand" and say "continuously operated."

MR. MOON: Absolutely.

CHAIRMAN MORELOCK: Yes. Or just clarify how you really are going to operate it.

MR. MOON: Okay.

DR. CANONICO: And page 7 is Boiler Attendant Procedures. You talk about "trained, qualified individual." Those are -- again, to me, those are words. They don't tell me anything about his training. Down below you talk about training. He's got to read and be familiar with these procedures. Is that the extent of his
training?

MR. MOON: No. That's not the extent of his training. They've had basically a week's worth of training on boiler operations. They will be trained to specific equipment procedures on how to operate those boilers, how to monitor those boilers. In addition to that, they'll be required to go through on-the-job orientation and training from the shift supervisor on down to the attendant.

And then those -- the training on the procedures will have to be requalified on those annually. Does that help?

CHAIRMAN MORELOCK: You may just want to detail that in the manual.

DR. CANONICO: Yeah. Because you're talking about much more than the simple words you have here.

MR. NEVILLE: Well, I think the training here is just talking about training to the manual, not all the qualifications and training of a boiler operator. But we can include that. I would put that in the job description and his qualifications of training there. Would that satisfy?
CHAIRMAN MORELOCK: Right. That's fair. Sure. You just want to -- you know, we always talk a lot about training and you're right, James, I mean, you do need to differentiate between the training specifically for your variance manual, but you also want to include the training that qualifies them to be that remote monitor or that boiler operator attendant as well. And what you're proposing is a good program, so I would certainly include it.

DR. CANONICO: And on page 8 of the normal daily duties, "The boiler attendant shall report to the boiler at the beginning of the shift," and et cetera. And Number 6 is "Boiler attendant will return to the boiler every four hours."

MR. MOON: That's correct.

DR. CANONICO: So is he at the boiler three times during the shift?

MR. MOON: At a minimum, yeah.

DR. CANONICO: Okay.

MR. MOON: I mean, they're going to have established rounds in their facilities, and those rounds will take them past those units. I mean, there's -- the methane reformer sets right
next to it in the ammonia plant, so they'll be in that area, watching fairly carefully. My expectation is that they'll be very close to those boilers and will look up and look at the site glass every once in a while.

And the same thing with the auxiliary boiler. It's in our water treatment area, and those areas will be fairly trafficked so they'll be a part of their rounds, too. But at a minimum is what's in here.

DR. CANONICO: Also, I see on this P3 form that it was manufactured for S.W. Corporation, Warren, Pennsylvania. It's the page after -- well, it's -- you've got pages -- they're just written in 1 of 4, 2 of 4, 3 of 4, I guess ...

MR. NEVILLE: The P3 form is what you're referring to?

DR. CANONICO: And they're dated, again, 1975. Who is S.W. Corporation? Is that you people?

MR. MOON: No, sir. That is the original manufacturer. Struthers Wells is what it stands for.

MR. NEVILLE: And that one, right
now, we do not have. That's a waste heat boiler
that they do not have a TN number for, and so that
one is not a part of this variance until we get
that TN number.

CHAIRMAN MORELOCK: That's the
Struthers Wells unit that came up from --

MR. MOON: Louisiana.

CHAIRMAN MORELOCK: -- Louisiana.

So the '73 on the P3 agrees with the manufacturer
date on your boiler data sheet.

MR. NEVILLE: Yes.

DR. CANONICO: And were they used?

MR. MOON: Yes.

CHAIRMAN MORELOCK: That was one
that was refurbished.

MR. BAUGHMAN: The plot plan of the
plant, what page is it on? Or am I missing the
plot plan?

MR. NEVILLE: Page 2.

MR. BAUGHMAN: That may be why I'm
missing it. There you go. Thank you.

MR. NEVILLE: This is an open-air
situation.

CHAIRMAN MORELOCK: Any other
questions or comments?
MR. BAUGHMAN: Do the boilers tie into a common header? Are these boilers -- I really couldn't tell real well by the steam piping diagram.

MR. MOON: The waste heat boiler that is not part of this variance is a 600-pound boiler. It will tie into the header as well as the auxiliary boiler. In fact, the auxiliary boiler actually gives that plant steam to basically do its startup.

MR. BAUGHMAN: Which one is the auxiliary?

MR. MOON: It would be 9701, H9701.

MR. BAUGHMAN: Okay.

MR. MOON: And they would tie into the 600-pound header. And then the other two waste heat boilers would be on a common header, too. Although they could be isolated.

MR. BAUGHMAN: So is the one boiler, the 2013 B&W that's rated at 725, does it tie into the same header as the two other B&W's?

MR. CHARLES: The high-pressure boiler, the 725, is what we -- our cite is high-pressure steam -- we let that down to a 200-pound steam header, which is tied to the other
two boilers from Babcock & Wilcox.

MR. BAUGHMAN: The O2 boiler?

MR. CHARLES: So Boiler Numbers 30 and 31 are combination boilers. They're primarily a waste heat boiler used off of a reformation flue gas, but have the ability to be fired in order to bootstrap up or start up the facility.

MR. BAUGHMAN: Yes, I understand that. My question was just on the 725 boiler, Number 29, if those three boilers, 30, 31, and 29, are tied in on the same pattern.

MR. CHARLES: Those three boilers, the H9701 is at a 600-pound header, which is let down into the 250-pound steam header, which ties into the other two.

MR. BAUGHMAN: But it's operating at a higher pressure. It's just reduced down, is what you're saying.

MR. CHARLES: It's just reduced down, yes.

MR. BAUGHMAN: Okay. Do you know what the relief valve set pressures are on the two boilers that have a lower pressure rating? In case the steam regulator should fail or get bypassed and we have that higher operating
pressure going to them, what's the set pressure of those other relief valves?

MR. CHARLES: The other relief valves on the boilers themselves?

MR. BAUGHMAN: Yes, sir.

MR. CHARLES: They're set at 300 pounds.

MR. BAUGHMAN: Do you know what it is set on the higher pressure boiler?

MR. CHARLES: 700 and 720. There's two.

CHAIRMAN MORELOCK: So does the header itself have a relief to protect it from overpressure?

MR. CHARLES: Yes. The relief, the let-downs, the superheater stations all have at least that.

MR. ROBINSON: Are they set lower?

MR. CHARLES: Without having the data in front of me, I wouldn't be able to recall. It would be released for the working pressure of the let-down stages at that point.

MR. ROBINSON: Good engineering practice, you don't want to overset your relief valves for the lower boilers.
MR. CHARLES: Absolutely.

CHAIRMAN MORELOCK: Well, I mean, your relief would have to be 300 or less for that 200-pound header. I don't know what the maximum for the 200-pound header is, but your two boilers, I mean, they're at least 300, so the reliefs on the boilers and that system couldn't exceed 300 so you don't back pressure -- overpressure the low-pressure boiler.

MR. CHARLES: If I recall, the let-down or the relief valves are downstream of the let-down stations and so therefore set the header pressure, which would be 300.

CHAIRMAN MORELOCK: Any other questions or comments?

(No verbal response.)

CHAIRMAN MORELOCK: Hearing none, do I have a motion for approval of this boiler variance with the modifications as noted in the minutes and contingent on a deputy inspector's successful inspection of the facility?

(No verbal response.)

CHAIRMAN MORELOCK: Is anybody going to take me up on my motion?

DR. CANONICO: I'll make a motion.
DR. JOHNSON: I'll second it.

CHAIRMAN MORELOCK: Okay. So is there any more discussion? I'm going to call the question. All in favor say, "Aye."

(Affirmative response.)

CHAIRMAN MORELOCK: Opposed?

(No verbal response.)

CHAIRMAN MORELOCK: Abstentions, not voting?

(No verbal response.)

CHAIRMAN MORELOCK: All right. The item passes.

MR. NEVILLE: Thank you.

MR. MOON: Thank you.

CHAIRMAN MORELOCK: Our last voted action today is that Administrator Jefferson has requested that the boiler board and the elevator board not meet the same week. So we are proposing to make some alterations for our future board meetings in 2015. Instead of the first Wednesday in March, June, September, and December, we're going to alter those for June, September, and December.

And right now, the proposed dates would be June the 10th, September the 9th, and we
were going to propose December the 9th, but
checking my calendar, I can't do December the 9th.
So we would either have to look at December 16th
or November the 18th.

So I'm opening the floor for
discussion. Is everybody okay with June the 10th?

DR. CANONICO: Well, it's hard to
make a decision until we look at our calendars. I
don't have mine with me.

CHAIRMAN MORELOCK: Okay.

DR. CANONICO: Why don't we have
Carlene just send a short email with the suggested
dates, and we can get back to her.

CHAIRMAN MORELOCK: Okay. All
right. So is everybody in agreement with that?

MS. BENNETT: How about December.

You said you had a conflict?

CHAIRMAN MORELOCK: Yes.

MS. BENNETT: Do you have an
alternate date that would work?

CHAIRMAN MORELOCK: Yes. Either
December the 16th or November the 18th. I don't
think you want to meet during Thanksgiving week.

DR. CANONICO: No.

MS. BENNETT: We'll shoot for the
16th.

CHAIRMAN MORELOCK: Okay. So we will table that item and vote, and we will vote on that by sending information back to Carlene.

We've got five whopping minutes left.

To be mindful of your time, Deborah, do we have an update on the fall conference?

MS. RHONE: I think -- Mark, do you have --

MR. FINK: I have a brief one.

CHAIRMAN MORELOCK: Okay.

MR. FINK: The fall conference, as Mr. Chapman mentioned before, we're in the process of interviewing for a boiler chief position. And we were going to bring that boiler chief onboard first, before moving forward with plans for the fall conference. So that's the update.

CHAIRMAN MORELOCK: Okay. All right. Very good. We'll look forward to that in the future, then.

I can give you a brief update on the reorganization of Rule 0800-3-3. We need to give Eugene an award for patience because we have put him off to address his comments. And we're addressing his comments through email right now.
So we will work through that process and see how close we get to maybe having an item -- if nothing else, we'll have a discussion item at the June meeting. I don't know if we'll have a voted item ready or not, but we're in progress of resolving his comments and addressing concerns about tankless water heaters while we're at it. So all of that is in process.

And the last discussion item is boiler operator training and certification, which we've talked about quite a bit. With our full agenda today, Dave had sent me an email, and I asked that we just move that to the June agenda to give time to review some information that we've asked Administrator Jefferson for, as far as training and licensing verbiage in programs. So we are proceeding on that. So that's our updates on discussion items.

There are no rule cases and interpretations today.

Our next board meeting, I can't tell you just yet but we will publish a date for the June meeting as soon as possible.

With that, I have no more agenda items. Do I have a motion to adjourn?
DR. CANONICO: So made.

MR. ROBINSON: Second.

CHAIRMAN MORELOCK: Everybody can vote with their feet. You can stand up. Travel safe going home. Thank you for coming today.

(Affirmative Response.)

END OF THE PROCEEDINGS.
CERTIFICATE

STATE OF TENNESSEE  
COUNTY OF WILLIAMSON  

I, Cassandra M. Beiling, a Notary Public in the State of Tennessee, do hereby certify:

That the within is a true and accurate transcript of the proceedings taken before the Board of Boilers and the Chief Inspector or the Chief Inspector's Designee, Tennessee Department of Labor & Workforce Development, Division of Workplace Regulations and Compliance, Boiler Unit, on the 4th day of March, 2015.

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 22nd day of March, 2015.

___________________________________
Cassandra M. Beiling, CCR, LCR# 371
Notary Public State at Large
My commission expires:  3/12/2016