



STATE OF TENNESSEE  
DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT  
BOARD OF BOILER RULES  
220 FRENCH LANDING DRIVE  
NASHVILLE, TN 37243  
(615) 741-2123

MINUTES

QUARTERLY MEETING OF THE  
STATE OF TENNESSEE  
BOARD OF BOILER RULES  
9:00 A.M. (CT) MARCH 5, 2014  
TOSHA HEARING ROOM – FIRST FLOOR  
220 FRENCH LANDING DRIVE  
NASHVILLE, TENNESSEE

- I. **CALL TO ORDER** – (12) -The meeting was called to order at 9:01 a.m. (CT) by Chairman Morelock.
  
- II. **INTRODUCTIONS AND ANNOUNCEMENTS** – (27) - Board members present: Brian Morelock; Dr. Dominic Canonico; Eugene Robinson and Dave Baughman. Department of Labor and Workforce Development employees in attendance: Sam Chapman; Carolyn Sherrod; Kim Y, Jefferson; Sydné Ewell; Deborah Rhone; Neil Jackson; Thomas Spangler; Jason Beard; and Carlene T. Bennett. Guests present: Allen Tripp; James Neville; John Sanders; Jason Persinger; Steve Morrison and Kevin Zeigler.  
  
(19) – Chairman Morelock made the announcement that in the event of an emergency or natural disaster, security personnel would take attendees to a safe place in the building or direct them to exit the building on the Rosa Parks side.
  
- III. **ADOPTION OF AGENDA** – (47) – Dr. Canonico made a motion to adopt the agenda which was seconded by Eugene Robinson. The vote was taken and the motion carried.
  
- IV. **APPROVAL OF DECEMBER 4, 2013 MEETING MINUTES** – (54) – A motion was made by Dr. Canonico and seconded by Eugene Robinson to accept the minutes as written. The vote was taken and the motion carried.
  
- V. **CHIEF’S REPORT** – (56) – Assistant Chief Chapman’s report reflects data from September –December 2013.
  - Total Number of Inspections: 12,350
  - Delinquents:

- State Inspectors – 986
- Insurance Agencies -1,003
- Total 1,989
- Violations:
  - Violations Found – 24
  - Uncorrected Violations – 21
- Q.C. Reviews Performed – 15
- Boiler Variance Inspections - 6

**VI. OLD BUSINESS - (72)**

None

**VII. NEW BUSINESS - (74)**

**14-01 – (75) – Domtar Paper – Kingsport, Tennessee – 6-Month Extension on Operating Certificate Proposal on two (2) power boilers. No Board member expressed a conflict of interest with this agenda item.**

Domtar engineering manager Steve Morrison announced that Domtar wished to present the proposal on only one (1) boiler, the recovery boiler. He stated that this proposal is a separate issue from the boiler language change that Domtar is proposing with the Department of Labor. His comments would focus on a 6-month extension to the regulation that requires an internal inspection annually. His comments will address concerns regarding the effect the inspection extension would have on the boiler. The plant in Kingsport, Tennessee was purchased by Domtar Corporation in 2007. Domtar is a global company with \$5.5 billion in revenue. The primary business of Domtar is pulp and paper which generates approximately 93% of its revenue. The plant covers 255 acres and employees 322 direct employees. The boiler is manned continuously while in operation. Domtar's recover boiler is run following the guidelines set forth by a federal committee called BLRBAC, Black Liquor Recovery Boiler Advisory Committee. This Committee is tasked with the safe operation of recovery boilers. Each recovery boiler is audited biennially by insurance representatives, other recovery boiler engineers, managers, and safety mangers. A copy of the latest audit completed on the Kingsport recovery boiler was presented as attachment C of the proposal.

The intent of Domtar's proposal is to provide enough evidence of good operating systems and practices of the boiler to authorize a 6-month extension on the annual operating certificate. There were three (3) main concerns that Steve Morrison addressed:

- Insufficient data to predict pressure part thickness in between shutdowns for inspection – Engineering technology has been developed that allows owners to determine a water tube thickness without cutting open the tube. The thickness of these pressure containing tubes can then be compared to the

minimum wall thickness as calculated by ASME code. With the exponential growth in technological abilities to more accurately measure tube thickness, a more accurate tube thickness trend can be developed without increasing the sample frequency. If the tube thickness is at or below the ASME required thickness (T-min), the tube needs to be replaced or thickened.

- Boiler tube erosion due to localized increased flue gas velocity from particulate buildup – The principle of slag buildup is well known and boiler manufacturers have mechanical cleaning systems incorporated in their boiler designs to minimize slag buildup. The cleaning systems used on the recovery boiler in the Kingsport plant is strategically placed soot blowers. These soot boilers use 400 psi, superheated steam to steam clean the fire side of the water tubes. They are activated based on a time interval and rotate as they extend into the fire side of the boiler. The concern of slag buildup can further be mitigated by inspecting the fireside through the use of cameras with displays in the control room and boiler inspection doors.
- Inability to detect changes within the boiler (water side or fire side) until next shutdown for inspection – A magnetite layer is developed and bonded to the tube wall. This magnetite layer provides a protective barrier between the water and the iron contained in the boiler tube. A water chemist at the Kingsport plant ensures proper water chemistry to prevent the removal of the magnetite layer and monitors the health of the layer by visually inspecting the water side tube surfaces during inspection shutdowns. The latest water side analysis report was presented as attachment E. Domtar believes with high confidence that this magnetite layer can be maintained whether the boiler is inspected every 12 months or every 18 months. Also, thermal stresses are introduced during heat-up and cool-down of the boiler. An extension of the operating certificate will aid in the reduction of these stresses by reducing the number of heat cycles (heat-ups and cool-downs).
- Eugene Robinson asked Steve Morrison if the boiler has had any repairs and the answer was “no”.
- Dave Baughman asked which of the two boilers was more volatile and his answer was “the Hog boiler”.
- Chairman Morelock asked in the calculation of T-min, how T-min is being used on an annual inspection basis to determine remaining life of the tubes. Mr. Morrison said they look at the metal wastage rate and determine whether or not they will go below the T-min based on historical data. Measurements are taken when the tubes are new and an annual corrosion rate established. Chairman Morelock asked, whether the annual corrosion rate was based on the previous year’s reading or the original reading? The response was both.
- Dr. Canonico asked if there had been any incident or explosion and the answer was “no”. The boiler has been in operation for 12 years.

- The Board thanked the representatives of Domtar for a very comprehensive presentation.
- (1706) – Dave Baughman commented that now would be a good time to look at setting up a mechanism for establishing minimum qualifications in order to certify boiler operator personnel because some of the states that permit longer intervals between inspections already have this mechanism in place.
- Eugene Robinson requested that in Attachment D the Tennessee serial number and national board number be added instead of referring to the boilers as boiler #1 and boiler #2.

Chairman Morelock stated that current Tennessee law requires all boilers to be inspected annually. The Board can revise the rules for the development of a guide and or checklist but cannot change any of the laws without legislative action. The Board does not have the authority to grant Domtar a variance under the law until House Bill 1806 is passed allowing for longer intervals between inspections. Sydne' Ewell, Legal Counsel, stated that typically laws that are passed have an effective date of July 1, so Domtar could attend the September, 2014 meeting and resubmit this variance request.

A motion was made by Dr. Canonico to postpone this agenda item. Eugene Robinson seconded the motion. The vote was taken and the motion carried unanimously with no conflicts of interest noted.

#### **VIII. OPEN DISCUSSION ITEMS (2334)**

**(1179) House Bill 1806** – Authorizes the Chief Boiler Inspector to grant variances to the requirements for frequency of inspections. Jason Beard, Legislative Liaison, Department of Labor & Workforce Development addressed the Board. He was contacted by Representative Shipley in January, 2014 regarding a request from Domtar which goes hand in hand with Domtar's request in agenda item 14-01. The proposed bill would amend Tennessee Code Annotated 68-122-110 to grant the option for a variance for longer intervals between inspections. The bill would require the Board to come up with a guide with an associated checklist to give requestors some business certainty when applying for a variance. Jason Beard read the current version of the propose bill and asked all parties to submit comments to Administrator Jefferson so he could iron out the best possible wording for all parties involved.

**(2376) Boiler Safety Fall Conference** – Deborah Rhone addressed the Board said a meeting was held in January and the Boiler Unit received approval from the Fiscal Division as well as from the Department of Finance and Administration regarding restarting the conference. It was decided that the State would establish a budgetary code to accept registration fees.

Company co-sponsorships would not be allowed. However, companies could opt to sponsor and host a reception or any other event instead of submitting money to the State. A meeting will need to be held to decide upon the date and location of the conference. Companies could sponsor attendees by paying their registration fees. State employees and Board member's registration fees would be waived. The target date for restarting of the Boiler Fall Conference is fall, 2015.

- (2498) Variance Fees** – TCA 68-122-113(e) states that inspections or review fees should not exceed seven hundred dollars (\$700). Currently, by rule, the fee is set at two hundred and fifty dollars (\$250) for a half day and five hundred dollars (\$500) for a full day. Administration wishes to increase the fee to three hundred and fifty dollars (\$350) for a half day and seven hundred dollars (\$700) for a full day. The rules must be updated to change the allowable fee amount that can be charged and to apply that same fee rate for quality systems reviews.
- (2757) Moving Code Requirements into Tennessee Rules** – Chairman Morelock presented a draft document for review. He asked for everyone to read the draft and submit suggestions to him in order for him to make it a real proposal for the June meeting.
- (2757) Realigning State rules for ease of use by installers and owners** – Chairman Morelock presented a draft document for review. He asked for everyone to read the draft and submit suggestions to him in order for him to make it a real proposal for the June meeting.
- (2951) Licensing of Boiler Operators** – Dave Baughman offered to spearhead research into the idea of implementing guidelines for training/certifying boiler operators and persons installing boilers.
- IX. RULE CASES & INTERPRETATIONS (2946)** – There were no rule cases and interpretations.
- X. THE NEXT BOARD OF BOILER RULES MEETING (2948)** - Is scheduled for 9:00 a.m. (CT), Wednesday, June 4, 2014 at the Department of Labor & Workforce Development office building located at 220 French Landing Drive, Nashville, TN.
- XI. ADJOURNMENT – (3196)** – A motion was made by Dr. Canonico to adjourn. The motion was seconded by Eugene Robinson. The vote was taken and the motion carried.