



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

**MINUTES**

**QUARTERLY MEETING OF THE  
STATE OF TENNESSEE  
BOARD OF BOILER RULES  
9:00 A.M. (CST), DECEMBER 1, 2010  
VOLUNTEER ROOM - FIRST FLOOR  
220 FRENCH LANDING DRIVE  
NASHVILLE, TENNESSEE**

- I. CALL TO ORDER - (10) - Chairman Lunn called the meeting to order at 9:00 a.m. (CST).
  
- II. INTRODUCTIONS AND ANNOUNCEMENTS - (18) - Board members present: Eddie Lunn; Dr. Domenic Canonico; Brian Morelock; Eugene Robinson; Dr. Glen Johnson; and Ed Vance. Department of Labor & Workforce Development employees in attendance: Arthur Franklin; Gary W. Cookston; Al Smith; Chad Bryan; Carlene T. Bennett; Deborah Rhone; and Neil Jackson. Guests present: Douglas H. Moore; Dustin Jones; Curt Ferguson; Chris Soper; Ernest H. Hudgins; and Kevin Jones.  
  
(28) - Assistant Administrator Cookston announced that in the event of a natural disaster or emergency, building security personnel would direct attendees to a safe place inside the building or ask them to evacuate to the parking lot toward the Rosa Parks side of the building.
  
- III. CONFLICT OF INTEREST STATEMENT AND ANNUAL CONFLICT OF INTEREST ACKNOWLEDGMENT & DISCLOSURE - (48) - Conflict of interest statements and annual conflict of interest acknowledgment and disclosure were completed by Board members present. Chairman Lunn reminded Board members to verbally disclose their conflicts of interest with agenda items prior to discussion.
  
- IV. ADOPTION OF THE AGENDA - (67) - Dr. Canonico made a motion to adopt the agenda with discussion of the explosion in Murfreesboro

inserted after the Chief's report. Ed Vance seconded the motion. The vote was taken and the motion carried.

V. APPROVAL OF THE JULY 15, 2010 SPECIAL CALLED MEETING MINUTES & SEPTEMBER 15, 2010 QUARTERLY MEETING MINUTES - (88)

- Dr. Canonico asked that *Section VII* be changed to *Section VIII* on page two, first bullet point, second sentence. He also requested that on page two, first bullet point, the sentence: "*Two defects were identified, removed and repaired*" be changed to "*Two defects were identified, removed and repaired in the proper manner.*" Brian Morelock made a motion to approve the July 15, 2010 special called meeting minutes with revisions noted. Dr. Glen Johnson seconded the motion. The vote was taken and the motion carried.
- Dr. Canonico made a motion to approve the September 15, 2010 quarterly meeting minutes. Eugene Robinson seconded the motion. The vote was taken and the motion carried.

VI. CHIEF'S REPORT - (161) - Chief Bryan's report covered data from July-September 2010. Due to new computer system implementation on Monday, June 28, 2010 accurate data cannot be reported on the number of delinquents and violations.

- Two-thousand six-hundred and sixty-one (2,661) inspections performed.
- Nine (9) quality control reviews performed.
- Three (3) boiler variance inspections performed.

(190) Discussion of the explosion in Murfreesboro, Tennessee - Dr. Glen Johnson asked if the cause of the explosion had been determined. Chief Bryan said interviews had been conducted for the second time with the operators, plant personnel, insurance carriers, and engineers. He said there were indications of what might have contributed to the situation but until metallurgical analysis had been performed, he was unwilling to disclose his exact findings. Dr. Canonico asked who would perform the metallurgical analysis. Chief Bryan said the insurance company would choose the firm to complete the analysis. Dr. Johnson said that in the few cases in the past, the cause was often some circumvention of safety devices whereas in this case it sounds like there might be some defect in manufacturing or workmanship. The Board said they looked forward to Chief Bryan's full report. Assistant Administrator Cookston said that the people at the facility were very fortunate that someone wasn't killed. Maintenance personnel walked out of the building fifteen (15) seconds before it exploded. There was a truck driver backed into a bay so that the percussion of the explosion went around him but the building around him

was torn up. There were pieces of the boiler as far as five-hundred fifty (550) feet away.

(261) - Dr. Canonico asked what the liability of the Board would be if they approved a variance request and someone was injured as a result. Al Smith, Deputy General Counsel said he did not think there would be any liability since the Board is not identifying a particular individual responsible for performing specific duties. The Board is allowing the job to be performed by someone chosen by the Company. If the company provides a person who meets that criteria but failed to do their duty, then the liability would not fall on the Board.

VII. OLD BUSINESS - (359)

None

VIII. NEW BUSINESS

**10-12** - (362) - Review a request and documentation from TAMKO Building Products Plant, 9206 Johnson Street, Knoxville, Tennessee for a variance to Boiler Attendant Rule, Paragraph 0800-03-03-.04(22). No Board member expressed a conflict of interest with this agenda item. Ernest Hudgins and Kevin Jones presented this item to the Board. This plant currently operates one high pressure boiler to produce high pressure steam for process and space heating. The plant plans to install a second high pressure boiler in the future but this variance request is for the primary boiler only. The primary high-pressure boiler is operated on demand twenty-four (24) hours per day, seven (7) days per week.

- Eugene Robinson asked which address is correct:
  - The one shown on the cover page - 2506 Johnston Street;
  - The address on page one (1), paragraph one (1) - 9206 Johnston Street;
  - The one at the bottom of page one (1) - 2506 Johnston Street NW.Mr. Huggins replied that 2506 Johnston Street NW is the correct address. Eugene Robinson requested the manual be changed throughout to reflect that.
- Eugene Robinson asked about page (2), item (1) which says: "*will install a complete computerized control system*". He wanted to know if the system was in place. Mr. Huggins said the microprocessor-based controls were in place but the hard wire interlocks and control panel had not been installed.
- Eugene Robinson said he had a problem with the terminology used throughout the manual for the boiler attendant and the boiler operator. At certain points in the text they are grouped together. He said the Board is looking for a person to maintain complete responsibility of

attending the boiler and performing certain task. Mr. Huggins said he would revise the wording in the manual to more clearly distinguish between the two.

- Eugene Robinson pointed out on drawing SK3, under installation notes, that number three (3) is incorrect, Mr. Huggins said it would be changed.
- Eugene Robinson said the text indicated the plant operated two (2), twelve (12) hour shifts but Appendix F indicates three shifts. Mr. Huggins said the plant does operate on two (2), twelve (12) hour shifts so Appendix F would be changed to reflect that. Mr. Robinson also pointed out that in Appendix F, in the Water Level column; there is an extra "No 2". Also, Appendix F does not provide a place to log any alarm problems or resolutions so that should be added.
- Eugene Robinson said on drawing SK2, he would like an emergency boiler shutdown switch located just outside each of the two (2) doors closest to the boiler.
- Dr. Canonico said page six (6), first sentence states: "*one gas fired steam high pressure boiler*" but Appendix A-1 states: "*Natural Gas & Number 2 Fuel Oil*". Dr. Canonico said the sentence on page six (6) should reflect that the boiler is "dual fuel". Mr. Morelock asked that the terminology be used consistently through the manual.
- Dr. Canonico and Brian Morelock said on Appendix D-1 there is no boiler attendant or remote monitor listed in the organizational chart. Mr. Huggins said they report directly to Crew Chief A, B, C and D. Brian Morelock said a line of authority should be shown for the boiler attendant and the remote monitor.
- Mr. Morelock said page seven (7) clearly delineates what a Boiler Attendant is and references Appendix G which outlines their duties. It would be helpful to have something similar for the Remote Monitoring personnel. Mr. Huggins said they are called Machine Tender's. Mr. Morelock thought that should be spelled out on page four (4) to make it clear that the Remote Monitor and the Machine Tender is one and the same. Also, it should be shown on the organizational chart.
- Mr. Morelock said the Checklist for Attendant Variance Requests, Item ten (10) asks: "*Is the person responsible for the boiler facility clearly identified and is the address and telephone number included?*" The manual reference given is Page One (1) but it does not clearly identify the person responsible for the boiler facility. Item eleven (11) asks: "*Does this person have the responsibility of keeping the Manual current?*" that person needs to be listed also.
- Chairman Lunn said page one (1), paragraph two (2), line three (3) states: "*in conjunction with a Honeywell 7800 Flame Safety System.*" but Appendix B states: "*Hawk 7700 and Fireye only*". Chairman Lunn confirmed that there is no Hawk 7700; he asked that Appendix B be changed.

Ed Vance made a motion to approve the variance contingent upon changes being made to the manual and passing field inspection by the Boiler Division. Brian Morelock seconded the motion. The vote was taken and the motion carried.

(688) - Neil Jackson, Quality Control Team Leader asked if the company's revised manual would include a revision page. Chairman Lunn said item nine (9) on the Checklist for Attendant Variance Requests states that "*Renewal request require a revision page in the System Operating Manual to show a summary of changes*" but since this is not a renewal request perhaps the Checklist wording should be revised to cover modification to the manual to include a summary of changes pages. Chairman Lunn offered to draft a rewrite of item nine (9) on the Checklist and present it as an agenda item at the March 2, 2011 meeting.

**10-13** - (846) - Review a request from INVISTA, 4501, Access Road, Chattanooga, Tennessee to use Interpretation BC06-16 to allow annual internal inspections to be replaced with external in-service operational inspections on six (6) Dowtherm™ A Vaporizers. No Board member expressed a conflict of interest with this agenda item. Justin Jones, Curt Ferguson and Douglas Moore presented this item to the Board. There are six (6) requirements covered in BC06-16 and INVISTA currently adheres to five (5) of them but needs clarification on requirement number four (4) which states "*Temperature measurements must be made to assure that over-heating of the heat transfer surfaces is not occurring.*" The company does not currently take temperature measurements of the heat transfer surfaces. Their approach would be to add a thermocouple to one of the tubes and have either a field readout that would be recorded on an operator patrol sheet and kept as an official business record or run the output signal into their DCS which monitors and controls the vaporizers and include an upper temperature limit that would alarm the operator of a potential overheating condition.

- Brian Morelock said the Board cannot advise the company how to make the temperature measurements. Requirement four (4) tells the company what it needs to do but it is up to the company to determine how they are going to do that. The Board can say whether the proposal complies with the intent of the requirement but can't specifically tell the company how to do it.
- Dr. Canonico said in BC06-16, NBIC RB-5603 states: "*Reliable and safe operation of a heater requires frequent analysis of the fluid to determine that its condition is satisfactory for continued operation.*" Requirement three (3) of BC06-16 states: "*Frequent analysis of the internal fluid must be performed to assure that the fluid is being maintained within satisfactory levels.*" Dr. Canonico asked how often this is performed and the company representative said it was done monthly.

- Dr. Canonico asked what it means on document J.P.NO.CH-P-FM-MCE-111, Page one (1) of four (4), under ENVIRONMENTAL when it says: *"Have all vapor leaks repaired as soon as possible."* He asked: how often is *"as soon as possible"*? The company representative said manual would be revised to read that the equipment shall be shut down immediately when a leak is identified and not operated until the leak is repaired.
- Dr. Canonico noted that INVISTA's October 11, 2010 letter to Interim Chief Boiler Inspector Eslie Rogers was stamped "received" on October 14, 2010 but document J.P.NO.CH-P-FM-MCE-111 has a revision date of October 26, 2010, he wanted to know why it was revised. The company representative said on page four (4) of that document, item sixty-eight (68) was changed because DuPont had turned over operation to INVISTA.
- Dr. Canonico said the company is requesting to set their internal inspection frequency at three (3) years with two (2) external inspections occurring in each of the first two (2) years and then one (1) external and one (1) internal in the third year. He said the Board isn't familiar with the company's processes to know what kind of problems there would be internally. It seemed to him that there would likely be more problems internally than externally. He asked how much work had been done to prove that an external inspection would tell them that the internal is in good shape. The company representative said they currently take turner gauge readings of all the tubes to measure buildup; there is a history of readings to compare those to; samples of Dowtherm are taken on a regular basis; and they have a heavy particulate re-claimer that is run monthly. They feel confident they have a very good monitoring system.
- Brian Morelock asked if the company representatives had received sufficient clarification of the requirements. They asked if they should verify with the Board or an Inspector of what they plan to do as far as the temperature readings. Brian Morelock said since these are registered with the State of Tennessee then they would have to get approval from an Inspector before installing the thermocouples and they will have to be properly documented, inspected, signed off on and must meet current guidelines, rules and laws.

Brian Morelock made a motion to approve the request. Ed Vance seconded the motion. The vote was taken and the motion carried.

**10-14** - (1332) -Valero, Memphis, Tennessee presented an annual report of their accepted Risk Based Inspection (RBI) program to the Board. No Board member expressed a conflict of interest with this agenda item. Chris Soper presented this item to the Board. The key activities related to the program in 2010 are as follows:

- Conducted large number of internal and external inspections this year in conjunction with a scheduled maintenance outage and several new unit constructions.
  - Internal Inspections: 228.
  - External Inspections: 544.
  - Jurisdictional Inspections: 349.
- Three new process units will have been commissioned by the end of 2010. Equipment with all three units has been registered in accordance with TN State Laws, and it is in the process of being added to the RBI program.
- One process unit (Unit 27) has been idled indefinitely. Equipment remains registered with the State. However, the RBI program will not be maintained for this unit. If the equipment is returned to service, the RBI program will be revalidated. Unit 27 included 18 equipment items and 23 circuits.
- Evergreen activities for the RBI program include:
  - Documenting inspection results.
  - Currently performing 5-year revalidation of RBI program per API-580
  - Risk Based Inspection requirements.
- Implemented new software that integrates all Inspection data including equipment inspection reports, thickness monitoring data, evaluation for 55 types of corrosion and damage mechanisms, and inspection scheduling integrated with RBI.

IX. RULE CASES & INTERPRETATIONS - (1576) - There were no rule cases and interpretations.

X. (1578) - The next Board of Boiler Rules meeting is scheduled for 9:00 a.m. (CST), Wednesday, March 2, 2011 at the Department of Labor & Workforce Development Office Building located at 220 French Landing Drive, Nashville, Tennessee.

XI. ADJOURNMENT - (1582) - The meeting adjourned at 10:32 a.m. (CST).