



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II**

245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

October 5, 2016

EA-16-064

Mr. Joseph W. Shea
Vice President, Nuclear Licensing
Tennessee Valley Authority
1101 Market Street, LP 3D-C
Chattanooga, TN 37402-2804

**SUBJECT: CLOSED MEETING SUMMARY – PRE-DECISIONAL ENFORCEMENT
CONFERENCE – BROWNS FERRY NUCLEAR PLANT – DOCKET NO. 05000296**

Dear Mr. Shea:

This refers to the pre-decisional enforcement conference conducted at your request at the Region II Office in Atlanta, GA on September 27, 2016, at 10:00 AM. The purpose of the meeting was to discuss the inspection findings documented in the U.S. Nuclear Regulatory Commission's (NRC) Inspection Report 05000296/2016013, dated July 27, 2016. Enclosed are a list of attendees and the presentation handouts. The meeting was closed to public observation because it involved the findings of an NRC Office of Investigations report that has not been publically disclosed.

The discussion focused on apparent violations involving failure to conduct roving fire watches and inaccurate/incomplete hourly fire watch records. During the presentation TVA accepted the violations as described, and provided the results of their causal analysis and corrective actions taken.

In accordance with Title 10 of the Code of Federal Regulations (CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room (PDR) or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

J. Shea

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Should you have any questions concerning this meeting, please contact me at 404-997-4415.

Sincerely,

/RA/

Alan Blamey, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Enclosures:

1. List of Attendees
2. Handout – Missed Fire Watches Region II
Pre-decisional Enforcement Conference

DISTRIBUTION:

Docket File
Farideh Saba
Dave Dumbacher
Tom Stephen
Adam Ruh
Alan Blamey

J. Shea

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Alan Blamey, Chief
Reactor Projects Branch 6
Division of Reactor Projects

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☐ PUBLICLY AVAILABLE ☒ NON-PUBLICLY AVAILABLE ☒ SENSITIVE ☐ NON-SENSITIVE
ADAMS: ☒ Yes ACCESSION NUMBER: ML16279A233 _____ ☒ SUNSI REVIEW COMPLETE ☒ FORM 665 ATTACHED

OFFICE	RII:DRP	RII:DRP				
SIGNATURE	/RA/	/RA/				
NAME	JSeat	ABlamey				
DATE	10/4/2016	10/5/2016				
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\DRP\IRPB6BROWNS FERRY\MEETINGS\2016\BFN FIRE WATCH PEC SUMMARY.DOCX

**BROWNS FERRY NUCLEAR PLANT
PRE-DECISIONAL ENFORCEMENT CONFERENCE**

Atlanta, Georgia
September 27, 2016 10:00 A.M. – 12:00 noon

Nuclear Regulatory Commission, Region II

Cathy Haney	Regional Administrator
Joel Munday	Director, Division of Reactor Projects
Mark Franke	Deputy Director, Division of Reactor Projects
Alan Blamey	Chief, Reactor Projects Branch 6
Dave Gamberoni	Enforcement and Allegations Team Lead
Scott Shaeffer	Chief, Operations Branch 1
Mark Kowal	Enforcement and Allegations Team Lead
Scott Sparks	Senior Enforcement Specialist
Sarah Price	Regional Counsel
Chelsea Smith-Standberry	Project Engineer
Jamin Seat	Project Engineer

Tennessee Valley Authority

Steve Bono	Site Vice President, Browns Ferry Nuclear Plant
Monte McAndrew	Operations Director, Browns Ferry Nuclear Plant
Mike Oliver	Licensing, Browns Ferry Nuclear Plant
Ryan Coons	Licensing, Browns Ferry Nuclear Plant
Erin Henderson	Sr. Manager, Fleet Regulatory Operations, TVA
Scott Vance	Associate General Counsel, TVA



**TVA Nuclear, Browns Ferry Nuclear Plant, Unit 3
Apparent Violation - Missed Fire Watches
Region II Pre-decisional Enforcement Conference**

Steve Bono
Browns Ferry Site Vice President
September 27, 2016

Agenda

- Apparent Violations
- Investigation Results
 - Immediate Actions Taken
 - Causal Analysis
 - Underlying Causes
 - Corrective Actions
 - Summary of Observations and Inspections
 - Fleetwide Common Factor Analysis
 - Corrective Actions
- Sustainability of Actions
- Closing Remarks



Apparent Violations

Event

Five contract employees willfully failed to conduct their assigned roving fire watches on at least one occasion in May 2016.

Compliance with procedure FP-0-000-INS012, Fire Watch Expectations, was required by TS 5.4.1.d, which stated that written procedures shall be established, implemented, and maintained for Fire Protection Program implementation.

Violation

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50.48, "Fire Protection," requires licensees to have a fire protection plan that outlines the plans for fire protection, detection, suppression, and damage limitation.

TVA accepts this violation.



Apparent Violations

Event

The hourly FW records were not completed in accordance with procedure NPG-SPP-18.4.6, "Control of Fire Protection Impairments." A review of the records found them to be inaccurate and incomplete.

Violation

10 CFR 50.9, "Completeness and Accuracy of Information" requires that any "information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects."

TVA accepts this violation.



Immediate Actions Taken

- BFN initiated a prompt investigation to identify the immediate learning of the events, and to share this immediate learning with the rest of the fleet.
- BFN permanently removed the involved fire watch contractors from all work activities.
- BFN provided a briefing covering expectations for conducting fire watches prior to the beginning of fire watch shifts. Briefing records were signed by each fire watch stating they understood the requirements of FP-0-000-INS012, Fire Watch Expectations.
- A causal analysis was initiated to aggressively evaluate the event for additional learnings and corrective actions.
- These fire watch events were entered in the BFN Corrective Action Program under CR 1028817.



Causal Analysis: Underlying Causes

A rigorous evaluation was performed to determine the underlying causes of the contract employee's willful misconduct. A qualified analyst reviewed interview statements, corrective actions, key card records, and applicable procedures.

The following causes were identified:

- Management observation plan lacked the necessary rigor to verify that fire watches were consistently adhering to procedural requirements.
- The workers violated procedural requirements.

Additionally, there was a failure to leverage TVA and industry operational experience (OE) to mitigate occurrence at BFN.



Causal Analysis: Corrective Actions

Based on the causal analysis results, BFN has implemented the following CAs:

- Administered discipline to those workers who failed to adhere to procedural requirements.
- Developed an alternate means of tracking the thoroughness of FW round performance to ensure they are reviewed and implemented. These actions include:
 - Revisions to procedure FP-0-000-INS019, Fire Protection Weekly Inspection, now require Fire Ops Foremen to conduct weekly, unannounced, random observations of personnel, to ensure their rounds are being performed in accordance with FP-0-000-INS012, Fire Watch Expectations.
 - Fire Operations and Operations management perform random reviews of security card reader information on a quarterly basis to verify the time fire watches spend in required areas is appropriate.

Summary of Random Observations and Inspections

In addition to the procedural requirements, Operations Management has performed the following verified the effectiveness of corrective actions through the following observations. As of September 1, 2016:

- A total of 108 FW observations were conducted since September 1, 2015.
- 33 unannounced roving FW field inspections were performed.
- 13 documented random reviews of FW documents were performed.
- 30 documented briefings with FW personnel were observed.
- 3 documented random reviews of security door card reader data were performed. Quality Assurance performed their own independent reviews of the fire watch process.

Announced visual, unannounced visual, and card reader inspections will provide defense-in-depth against future fire watch willful misconduct.

There have been no additional instances of willfully failing to follow the fire watch procedural guidance.

Fleetwide Common Factor Analysis

- Following the BFN event, the TVA nuclear fleet initiated a common factor analysis to evaluate commonalities associated with multiple fleet events involving willful behavior. The single common factor identified in this analysis was that TVA structure for supplemental personnel oversight needs improvement.
- Effective December 2015, the most significant action is that there are no contracted task managers overseeing workers from the same company.

Sustainability of Actions

- BFN performs unannounced observations of fire watch rounds in accordance with the implementing procedure.
- BFN performs random reviews of fire watch door records in accordance with the implementing procedure.
 - Paperwork inadequacies / discrepancies were discovered, and CRs were written for each instance.
- Quality Assurance provides independent oversight of the fire watch process.
- As part of BFN's recent transition from Appendix R to NFPA-805:
 - Many fire watch duties have been incorporated into Fire Patrols, which are owned by Operations, and are performed by Assistant Unit Operators (AUCs) as part of their regular walkdowns.
 - Fire Operations has responsibility for fire watches associated with temporary situations and mods.