



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

May 15, 2015

LICENSEE: NextEra Energy

FACILITY: Point Beach Nuclear Plant, Units 1 and 2

SUBJECT: SUMMARY OF JUNE 9 – 12, 2014, AUDIT AT POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2, ASSOCIATED WITH LICENSE AMENDMENT REQUEST TO TRANSITION TO NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 805 (TAC NOS. MF2372 AND MF2373)

The purpose of this summary is to document the results of an audit performed at Point Beach Nuclear Plant (PBNP) associated with a National Fire Protection Association Standard 805 (NFPA 805) license amendment request (LAR) dated June 26, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML13182A353, ML13182A350, and ML1382A351 (non-publicly available)).

A review team, consisting of U.S. Nuclear Regulatory Commission (NRC) staff and contractors from the Pacific Northwest National Laboratory (PNNL) and Southwest Research Institute (SwRI)/Center for Nuclear Waste Regulatory Analyses (CNWRA), participated in a regulatory audit of PBNP, located in Two Rivers, Wisconsin from June 9 – 12, 2014. The regulatory audit supports the review of the LAR dated June 26, 2013, submitted by NextEra Energy Point Beach, LLC (NextEra or the licensee), to transition the plant's fire protection licensing basis to Title 10 of the *Code of Federal Regulations* (CFR) 50.48(c), which endorses with exceptions NFPA 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition.

The purpose of the audit was to gain an understanding of the information needed to support the NRC staff's licensing decision regarding the LAR and to develop high quality requests for additional information (RAIs), as needed. The information submitted in support of the PBNP LAR is under final review, and any additional information needed to support the LAR review will be formally requested by the staff in accordance with Office of Nuclear Reactor Regulation Office Instruction LIC-101, "License Amendment Review Procedures."

The audit team consisted of 12 NRC, 2 PNNL, and 1 CNWRA staff. Enclosure 1 provides the schedule of activities during the audit. Enclosure 2 lists NRC staff, PNNL staff, CNWRA staff, and the licensee's staff, and contractors who participated in the audit. Enclosure 3 contains a list of documents reviewed by the team.

The audit team held an entrance meeting on Monday, June 9, 2014, with the licensee's staff and contractors. During the remainder of the audit, team members met in smaller groups according to the audit plan (ADAMS Accession No. ML14127A294). The PBNP staff provided plant walk-downs focusing on fire protection engineering (FPE), safe shutdown (SSD)/circuit analysis (CA), fire probabilistic risk assessment (PRA), and fire modeling (FM).

Technical discussions were focused on five major areas: FPE, SSD/CA, FPRA, FM, and programmatic review.

At the conclusion of the audit, the audit team participated in a summary exit meeting with PBNP staff and management on June 12, 2014. The NRC staff provided a brief synopsis of the team's goals, objectives, walkdown experience, and technical discussions.

Please direct any inquiries to me at 301-415-8371, or via email at Mahesh.Chawla@nrc.gov.



Mahesh Chawla, Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-266 and 50-301

Enclosures:

1. Audit Schedule
2. Audit Participants
3. Audit Documents

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## Schedule of Activities

### Monday, June 9, 2014

- 9:00 am      Audit entrance meeting  
Plant overview discussions  
Audit team members established computer connections, and began document reviews at the Point Beach Nuclear Plant Energy Center adjacent to the Point Beach Nuclear Plant, Two Rivers, Wisconsin,
- 9:30 am      Virtual Tour
- 10:00 am     Breakout sessions: Fire PRA, Fire Modeling, SSD and Fire Protection Engineering
- 1:00 pm      Continue breakout sessions, reviews, and clarification of RAIs.  
Continue reviews: Fire Modeling, SSD, Fire PRA, Main control room abandonment (MCR), multiple spurious operations (MSO), Fire Protection Engineering (FPE).
- Continue review of Fire PRA and Fire Modeling, in support of Fire PRA; NFPA 805 Chapter 3. Start review of radioactive release, recovery actions, non-power operations, safe shutdown, nuclear safety capability assessment
- 4:30 pm      Licensee wrap up
- 5:00 pm      Adjourn

### Tuesday, June 10, 2014

- 8:00 am      Plant Tour – meet at plant, prepare for tour, safety briefing, break into tour groups
- 1:00 pm      Breakouts continue for reviews
- 4:30 pm      Licensee wrap up

**Wednesday, June 11, 2014**

- 8:30 am Plant modifications presentation
- 10:00 am Programmatic breakout session
- 10:15 am PRA breakout session
- 12:30 pm Fire PRA and fire modeling breakout sessions
- 4:30 pm Licensee wrap up

**Thursday, June 12, 2014**

- 8:00 am Main Control Room (MCR) abandonment presentation
- 8:30 am Final reviews and closeout discussions completed
- 10:00 RAI process presentation
- 10:45 am SSD - RAI discussion and closeout
- 1:00 pm Audit Exit Meeting

## List of Participants

### U.S. Nuclear Regulatory Commission (NRC) Team

- Leslie Fields            NRC            Audit Team Leader
- Harold Barret           NRC            Audit Technical Lead
- Alex Klein               NRC            Branch Chief/FPE/FM/SSD
- Hossein Hamzehee     NRC            Branch Chief/FPRA
- Jay Robinson           NRC            RAI Lead/Programmatic
- Gary Cooper            NRC            SSD
- Thinh Dinh              NRC            FPE
- Brian Metzger          NRC            FM
- JS Hyslop               NRC            PRA
- Barry Miller            NRC            Observer
- Mollie Semmes        NRC            Observer
- D'Andre McMillan     NRC            Observer

### Pacific Northwest National Laboratory (PNNL) Team

- Karl Bohlander        PNNL          FPE/SSD
- Garill Coles           PNNL          PRA

### Center for Nuclear Waste Regulatory Analyses (CNWRA) Team

- Marc Janssens        CNWRA        FM

### Point Beach Team

- Bryan Woyak           Programs Engineering Manager
- Tom Carmody          PBNP Audit Response Team Lead
- Eric Schmidt          Programs Engineering Supervisor - Technical Lead
- Reginald Allen        Classical Fire Protection
- Jeremy Fischer        Programs Engineering/Fire Protection
- Francisco Joglar      Fire Modeling
- Tom Jessesky         Operations/Shift Manager
- Anil Julka             Fleet Engineering Reliability & Risk Manager/  
Probabilistic Risk Assessment
- Jon Leiker             Engineering/Probabilistic Risk Assessment
- Rick Mrozinsky        Programs Engineering/Safe Shutdown
- William Cross         Fleet Regulatory Programs Manager
- Robert Regan          Fleet Project Manager

- Vinny Rubano NFPA 805 Engineering Manager
- Mike Millen Licensing Manager
- Ron Seizert Licensing Supervisor
- Harv Hanneman Licensing Lead
- Tom Schneider Senior Licensing Engineer
- Brenda Scherwinski Licensing Analyst

**Industry Representatives (none)**

- Julius Bryant Duke/Observer
- Jeff Ertman Duke/Observer
- Steven Brown Xcel Energy/Observer
- Dave Malek Xcel Energy
- Paul Bemis Diablo Canyon
- Brent Waggener Diablo Canyon
- Kathy Bartlett Diablo Canyon

### **List of Documents Reviewed during the audit**

- P2091-2700-01, Rev. 1: Control Room Risk Calculation
- P2091-2900-01, Rev 3: Compartment Analysis Notebook (including Appendix A)
- P2091-2900-04, Rev 1: Multi-Compartment Screening and Analysis
- R2168-1003B-0001, Rev. 0: Plant-Specific V&V Analysis Performed
- The following HGL calculations (areas with high  $\Delta$ CDF):
  - R2168-001-187: Zone 187 in Area A01-B, Monitor Tank Area
  - R2168-001-305: Zone 305 in Area A24, 4 kV Vital Switchgear Room
  - R2168-001-309: Zone 309 in Area A28, G02 Diesel Generator Room
  - R2168-001-318: Zone 318 in Area A30, Cable Spreading Room
- The following HGL calculations (areas with high CDF):
  - R2168-001-151: Zone 151 in Area A02, Safety Injection Pump Room
  - R2168-001-156: Zone 156 in Area A06, MCC Room 1B32
  - R2168-001-166: Zone 166 in Area A15, MCC Room 2B32
  - R2168-001-237: Zone 237 in Area A01-B/46, CC HX & Boric Acid Tank Room
  - R2168-001-304N: Zone 304N in Area A23N, Aux Feedwater Pump Room (North)
  - R2168-001-304S: Zone 304S in Area A23S, Aux Feedwater Pump Room (South)
  - R2168-001-675: Zone 675 in Area A01-F, 13.8 kV Switchgear Big North (H03)
  - R2168-001-676: Zone 676 in Area A01-F, 13.8 kV Switchgear Big Center (H01)
  - R2168-001-677: Zone 677 in Area A01-F, 13.8 kV Switchgear Big Center (H02)
- Detailed report for FDS plume analysis in compartment 158 (see LAR, Attachment J)
- EPM Procedure EPM-DP-FP-001, Rev 3: Detailed Fire Modeling
- Hughes Report 1RCG27064.000.001, Rev 0: Detailed Fire Modeling in Selected Point Beach Nuclear Plant Fire Zones
- P2091-2700-01, Rev. 2: Control Room Risk Calculation
- R2168-1003B-0001, Rev. 1: Plant-Specific V&V Analysis Performed
- P2091-2920-02, Rev. 3: Structural Steel-Fire Interaction Analysis

Technical discussions were focused on five major areas: FPE, SSD/CA, FPRA, FM, and programmatic review.

At the conclusion of the audit, the audit team participated in a summary exit meeting with PBNP staff and management on June 12, 2014. The NRC staff provided a brief synopsis of the team's goals, objectives, walkdown experience, and technical discussions.

Please direct any inquiries to me at 301-415-8371, or via email at Mahesh.Chawla@nrc.gov.

*/RA/*

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AKlein, NRR  
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L. Fields, NRR  
J. Robinson, NRR  
J. Cameron, RIII  
K. Barclay, RIII  
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**ADAMS Accession No.: ML15121A057**

**\*via memorandum dated April 8, 2015 (ML15075A042)**

OFFICE	DORL/LPL3-1/PM	DORL/LPL3-1/LA	DRA/AFP/BC*	DRA/APLA/BC*	DORL/LPL3-1/BC	DORL/LPL3-1/PM
NAME	MChawla	MHenderson	AKlein	HHamzehee	DPelton	MChawla
DATE	05/14/2015	05/11/2015	04/08/2015	04/08/2015	05/15/2015	05/15/2015

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