NEXTera ENERGY POINT BEACH

February 7, 2011

NRC 2011-0018
10 CFR 50.73

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Point Beach Nuclear Plant, Unit 2
Docket 50-301
Renewed License No. DPR-27

Licensee Event Report 301/2010-003-00
Technical Specification Required Shutdown

Enclosed is Licensee Event Report (LER) 301/2010-003-00 for Point Beach Nuclear Plant (PBNP), Unit 2. This LER documents the completion of a Technical Specification required shutdown. Pursuant to 10 CFR 50.73(a)(2)(i)(A), the event is reportable as a completion of any nuclear plant shutdown required by the plant's Technical Specifications.

This submittal contains no new or revised regulatory commitments.

If you have questions or require additional information, please contact Mr. James Costedio at 920/755-7427.

Very truly yours,

NextEra Energy Point Beach, LLC

Larry Meyer
Site Vice President

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
Resident Inspector, Point Beach Nuclear Plant, USNRC
PSCW

NRC FORM 366 (10-2010) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 10/31/2013

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resourse@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

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4. TITLE
Technical Specification Required Shutdown

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
12	13	2010	2010	- 003 -	00	02	7	2011	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE
MODE 1

10. POWER LEVEL
100%

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: *(Check all that apply)*

- ☐ 20.2201(b)
- ☐ 20.2201(d)
- ☐ 20.2203(a)(1)
- ☐ 20.2203(a)(2)(i)
- ☐ 20.2203(a)(2)(ii)
- ☐ 20.2203(a)(2)(iii)
- ☐ 20.2203(a)(2)(iv)
- ☐ 20.2203(a)(2)(v)
- ☐ 20.2203(a)(2)(vi)
- ☐ 20.2203(a)(3)(i)
- ☐ 20.2203(a)(3)(ii)
- ☐ 20.2203(a)(4)
- ☐ 50.36(c)(1)(i)(A)
- ☐ 50.36(c)(1)(ii)(A)
- ☐ 50.36(c)(2)
- ☐ 50.46(a)(3)(ii)
- ☒ 50.73(a)(2)(i)(A)
- ☐ 50.73(a)(2)(i)(B)
- ☐ 50.73(a)(2)(i)(C)
- ☐ 50.73(a)(2)(ii)(A)
- ☐ 50.73(a)(2)(ii)(B)
- ☐ 50.73(a)(2)(iii)
- ☐ 50.73(a)(2)(iv)(A)
- ☐ 50.73(a)(2)(v)(A)
- ☐ 50.73(a)(2)(v)(B)
- ☐ 50.73(a)(2)(v)(C)
- ☐ 50.73(a)(2)(v)(D)
- ☐ 50.73(a)(2)(vii)
- ☐ 50.73(a)(2)(viii)(A)
- ☐ 50.73(a)(2)(viii)(B)
- ☐ 50.73(a)(2)(ix)(A)
- ☐ 50.73(a)(2)(x)
- ☐ 73.71(a)(4)
- ☐ 73.71(a)(5)
- ☐ OTHER

Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

NAME	TELEPHONE NUMBER (Include Area Code)
R. Clark	920/755-7464

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☒ NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On December 13, 2010, at 1205 CST, preparations for a Technical Specification (TS) required shutdown were initiated on Point Beach Nuclear Plant (PBNP) Unit 2. TS Limiting Condition for Operation (LCO) 3.1.4, Rod Group Alignment Limits, was not met because Surveillance Requirement (SR) 3.1.4.2 was not met. The shutdown was subsequently completed at 1703 CST, December 13, 2010.

A degraded field connection for the F-6 control rod caused control rod fuse 21 to blow, which ultimately resulted in the urgent and non-urgent alarms being received during performance of control rod exercises and the inability to complete the surveillance test. Following the shutdown, when a connection on a patch panel in containment was opened, checked and re-seated, the fault condition cleared as validated by numerous megger readings.

Additional corrective actions include inspections of the connections during each unit's 2011 refueling outage. These actions are being tracked in the site's corrective action program.

This 60-day licensee event report is being submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(i)(A), the completion of any nuclear plant shutdown required by the plant's Technical Specifications.

LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET

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NARRATIVE

Event Description:

On December 13, 2010, at 1205 CST, preparations for a Technical Specification (TS) required shutdown were initiated on Unit 2. TS Limiting Condition for Operation (LCO) 3.1.4, Rod Group Alignment Limits, was not met as a result of Surveillance Requirement (SR) 3.1.4.2 not being met. The shutdown was subsequently completed at 1703 CST, December 13, 2010.

This 60-day licensee event report is being submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(i)(A), the completion of any nuclear plant shutdown required by the plant's Technical Specifications.

Event Analysis:

On December 10, 2010, at 1350 CST, during performance of TS surveillance procedure TS-06, Rod Exercise Test, rod control urgent and non-urgent failure alarms occurred while stepping Control Bank B rods [AA] out. Power cabinet 2AC had an urgent alarm locked in, and power cabinets 2AC and 1BD had the non-urgent alarm locked in. These alarms were verified locally in the Unit 2 rod drive room. Unit 2 remained at 100% power.

Initial troubleshooting and repair reset the power supply crowbars and replaced the blown fuse, FU 21. The test was recommenced on December 10, 2010, at 2212 CST and Control Bank B was stepped out one step as procedurally required with no alarms. When Control Bank B was subsequently stepped inward one step, both rod control urgent and non-urgent failure alarms were received. Both of the times that Control Bank B rods failed to move, the movable gripper coil power supply fuse (FU 21) blew for control rod F-6. When the F-6 control rod fuse failed, it resulted in outward rod motion of one additional step. Troubleshooting continued through the weekend of December 11 and 12, 2010.

Discussions with NSSS support engineers suggested a short between cables or a short to ground affecting the F-6 control rod movable gripper coil circuit which caused the FU 21 fuse to blow. Initial megger checks from cable to station ground determined that the resistance was as low as 5 MΩ. Subsequent megger readings varied but were as low as 18 Ω.

At 2143 CST on December 12, 2010, the surveillance procedure for Control Banks A, C and D and Shutdown Banks A and B was completed. However, the failure of Control Bank B rods to step in correctly resulted in the inability to satisfy SR 3.1.4.2. Unit 2 was shut down on December 13, 2010, when LCO 3.1.4 was not met because of SR 3.1.4.2 not being met. Troubleshooting and repairs had been unsuccessfully attempted between receipt of the alarms on December 10, 2010, and the shutdown on December 13, 2010.

Safety Significance:

When the F-6 control rod fuse failed, it resulted in outward rod motion of one additional step. The outward step occurred outside of the active fuel region and had no impact on core reactivity. Additionally, control rods tripped as required during the shutdown on December 13, 2010. Thus, the safety significance of the event was low. There was no impact on the health and safety of the public as a result of this event. This is not a safety system functional failure.

LICENSEE EVENT REPORT (LER)
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NARRATIVE

Cause:

A degraded field connection for the F-6 control rod caused control rod fuse 21 to blow, which ultimately resulted in the urgent and non-urgent alarms being received during performance of control rod exercises and the inability to complete the surveillance test. Following the shutdown, when a connection on a patch panel in containment was opened, checked and re-seated, the fault condition cleared as validated by numerous megger readings indicating the field connection had become degraded.

Corrective Actions:

The following corrective actions were taken:

- All system cards were tested, repaired, and returned to the system.
- All rod control cables were tested, and cable issues were addressed.
- All +24 and -24 V DC power supplies in all power cabinets were replaced.
- Post-maintenance testing demonstrated that the system now performs as designed.

The following corrective actions will be taken and are being tracked in the site's corrective action program:

- Unit 2 control rod drive mechanism (CRDM) head and patch panel connections will be inspected during the Unit 2 spring 2011 refueling outage.
- Unit 1 CRDM head and patch panel connections will be inspected during the fall 2011 refueling outage.
- Meggar/ECAD testing will be added to the CRDM PM schedule.
- The Unit 1 24 V DC power supplies will be replaced during the fall 2011 refueling outage.

Previous Occurrences:

None

Failed Components Identified:

None