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

Point Beach Nuclear Plant, Unit 1
Docket 50-266
Renewed License No. DPR-24

Licensee Event Report 266/2008-003-01
Appendix R Fire Scenario Resulting In
Safe Shutdown Required Capability Not Maintained

Enclosed is Licensee Event Report (LER) 266/2008-003-01 for the Point Beach Nuclear Plant, Unit 1. This report is a supplement to LER 266/2008-003-00, which was submitted on September 15, 2008. LER 266/2008-003-00 described an inadequate cable separation condition which could have compromised the plant's ability to meet Appendix R safe shutdown requirements.

This supplement updates information previously submitted by NextEra Energy Point Beach, LLC (Next Era) relating to an extent of condition evaluation and a risk significance evaluation. NextEra agreed to provide this supplement during a teleconference with the NRC held on March 30, 2009.

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

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(See reverse for required number of digits/characters for each block)

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 Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@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.

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4. TITLE
Appendix R Fire Scenario Resulting In Safe Shutdown Required Capability Not Maintained

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
07	16	2008	2008	- 003 -	01	05	11	2009	Point Beach Unit 2	05000301
									FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE
Unit 1 MODE 1
Unit 2 MODE 1

10. POWER LEVEL
Unit 1 100%
Unit 2 100%

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

<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input checked="" type="checkbox"/> OTHER
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

NAME James Costedio	TELEPHONE NUMBER (Include Area Code) 920/755-7427
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR

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

This supplement provides the results of the detailed extent of condition evaluation completed in March 2009 and the risk significance evaluation completed on April 17, 2009. On July 16, 2008, plant staff concluded that an inadequate cable separation condition in the Auxiliary Feedwater (AFW) room could potentially compromise the plant's ability to meet Appendix R safe shutdown requirements. An 8-hour report was made via the emergency notification system (EN 44351), pursuant to 10 CFR 50.72(b)(3)(ii) (B). Immediate corrective actions included fire area rounds already being performed by plant personnel, implementation of transient combustible controls in the AFW area and performance of thermography for insipient fire detection in the AFW pump rooms.

An extent of condition evaluation completed in March 2009 confirmed the results of the August 2008 evaluation identifying six (6) areas where an inadequate cable separation condition could potentially result in a loss of significant equipment in areas beyond that postulated in the initiating fire area. The results of a risk significance evaluation completed on April 17, 2009, concluded that the risk significance of each of the inadequate cable separation conditions was less than the red finding threshold and may be resolved in accordance with the alternate methods established in NFPA-805.

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A. EVENT DESCRIPTION

In June 2008 an inadequate cable [EIS=CBL] separation condition was identified while performing an NFPA-805 applicability review. As a result of the inadequate cable separation, the potential was identified for a fire in fire area A23S, South Area of the Auxiliary Feedwater (AFW) room to propagate to fire area A24, Vital Switchgear (VSG) room. A fire in the South Area of the AFW room could cause a short circuit in a cable that traverses the AFW room and the VSG room, causing ignition of the cable. The Point Beach Nuclear Plant (PBNP) Safe Shutdown Analysis assumes a fire in a single fire area. Following further analysis, on July 16, 2008, plant engineering concluded that the inadequate cable separation created the potential for being unable to meet Appendix R safe shutdown capability. An 8-hour non-emergency report, EN 44351, was made in accordance with 10 CFR 50.72(b)(3)(ii)(B), as an event or condition that results in the nuclear power plant being in an unanalyzed condition that significantly degrades plant safety. A fire in areas A23S and A24, could cause three of the four AFW pumps [EIS=P] to be unavailable, which does not meet the requirements for Appendix R safe shutdown capability for Unit 1. Compensatory measures were identified to address the situation. These measures consisted of area fire rounds already being performed, implementation of transient combustible controls and performance of thermography for insipient fire detection in the AFW pump rooms.

In August 2008 an extent of condition evaluation was performed which identified six (6) areas where an inadequate cable separation condition could potentially result in a loss of significant equipment in areas beyond that postulated in the initiating fire area. In March 2009 a detailed extent of condition evaluation was completed, including cable/fire initiator walkdowns, which confirmed the results of the August 2008 evaluation. The results of a risk significance evaluation completed on April 17, 2009, concluded that the risk significance of each of the inadequate cable separation conditions was less than the red finding threshold established in the NRC Reactor Oversight Program (ROP) process.

B. EVENT ANALYSIS

While performing reviews as part of the conversion to NFPA-805, Next Era Energy Point Beach, LLC (formerly FPL Energy Point Beach, LLC) determined that power cables to individual components that are fed from a 4 kV bus [EIS=BU] located in the same fire area as the DC control power [EIS=EJ] feed to the bus, would not clear a potential fault condition. Specifically, this cable routing configuration has both DC control and associated 4 kV power [EIS=EB] cables present in the same fire area without required fire protection features such as fire wrap and fire rated walls. This condition appears to be an original design feature in the plant that was not correctly analyzed in the existing safe shutdown analysis. This condition was identified during the transition to NFPA-805. Although this is a historical design issue, there were previous opportunities to identify the design discrepancy. The discrepancy was not recognized because of an incorrect assumption that the 4 kV breakers [EIS=BKR] would trip on overcurrent without DC control power.

Following discovery of the condition, an extent of condition evaluation encompassing 71 fire areas was performed in August 2008. The review identified the DC control power for breakers that were located in the same fire area as the respective 4 kV power cables. It was then postulated that a fire in one of the fire areas could first disable the respective bus 125 V DC breaker control power and short circuit the associated power cable. With the loss of breaker control, the power cable protection would be defeated. The cable damage sequence assumed that secondary fires would occur electrically upstream of the fault location due to the

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cable-withstand rating being exceeded. The secondary fire location would be in a different location than the initial fire location, which could cause additional equipment to become unavailable.

The extent of condition evaluation performed in August 2008 identified six (6) areas where power cable protection could potentially become disabled and result in a loss of significant equipment in areas beyond that postulated in the initiating fire area. In March 2009 a detailed extent of condition evaluation was completed, including cable/fire initiator walkdowns, which confirmed the results of the August 2008 evaluation. The results of the risk significance evaluation completed April 17, 2009, concluded that each of the cable configurations of concern, as well as the aggregate of the cable configurations, was less than the red finding threshold established in the ROP process.

C. SAFETY SIGNIFICANCE

The safety significance of the reported condition is not high because the likelihood of occurrence is low. A fire would initially have to occur in area A23S (AFW pump room south). The room itself is equipped with fire detection sensors that automatically actuate the installed area halon suppression system. Area A23S has a low combustible loading.

The postulated fire must first directly impact control power cables associated with panel D11, (125 V DC Control Panel) which contains the 125 V DC control power for the protective features for breakers on buses 1A03 (Unit 1 4.16 kV Bus Switchgear) and 1A05 (Unit 1 4.16kV Safeguards Bus Switchgear) one of which is breaker 1A52-58, (Power to 1X13 Station Service Transformer), the normally energized power supply to transformer 1X13 (Unit 1 Station Service Transformer). For the postulated fire to damage equipment in another fire area, control power for the 1X13 supply breakers must be lost first, prior to any associated power cable damage. The postulated fire is in area A23S, the AFW pump room on elevation (El). 8' of the Control Building. Control cables in the room are assumed damaged first, prior to power cable damage. The control cables go to the D11 panel, which is located on El. 26' in the Cable Spreading room. Since the assumed fire is located in area A23S, and AFW pumps 1P29 (Turbine-Driven Auxiliary Feedwater Pump) and P38A (Electric-Driven Auxiliary Feedwater Pump) are located in area A23S, Appendix R requires the assumption that 1P29 and P38A capability is lost.

The postulated fire is also assumed to migrate through cable raceways, resulting in short circuit faults in power cables supplying transformer 1X13. This causes electric current draw in excess of cable withstand rating in the 1X13 supply cable because the control power for the protective features was lost when power panel D11 control cable was damaged. With current values greater than cable withstand ratings, a secondary fire is assumed to start in area A24 (4160 V Vital Switchgear Room). The loss of control power must occur prior to the fire-induced power cable overcurrent condition thus preventing automatic protective features from actuating.

The postulated secondary fire in area A24, which is equipped with fire detection equipment that automatically initiates a halon suppression system and is an area with a moderate combustible loading, is conservatively assumed to damage auxiliary feedwater pump P38B (Electric-Driven Auxiliary Feedwater Pump), thus making the pump unavailable to satisfy an Appendix R Safe Shutdown function.

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If this unique sequence of events occurred, the Unit 1 Auxiliary Feedwater pumps (1P29, P38A and P38B), credited for satisfying an Appendix R required Safe Shutdown function, would not be available.

In August 2008 an extent of condition evaluation was performed to identify similar configurations where equipment power cables and DC control cables associated with a single 4kV breaker were located within the same fire area. Six (6) areas were identified where power cable protection could potentially become disabled and result in a loss of significant equipment in areas beyond that postulated in the initiating fire area. In March 2009 a detailed extent of condition evaluation was completed, including cable/fire initiator walkdowns, which confirmed the results of the August 2008 evaluation. A risk significance evaluation was completed April 17, 2009 to determine whether any of the cable configurations of concern exceeded the threshold to be considered a red finding. The evaluation used a conservative screening approach, in lieu of the Significant Determination Process (SDP) contained in the Reactor Oversight Program (ROP), to identify potential secondary fire conditions where more detailed analysis and/or additional compensatory measures may be required. The results of the risk significance evaluation concluded that the configurations of concern were less than the red finding threshold for risk significance and may be resolved in accordance with the alternate methods established in NFPA-805.

D. CAUSE

The cause of the event is a historical design issue that was identified during the transition to NFPA-805. Although this is a historical design issue, there were previous opportunities to identify the design discrepancy. The discrepancy was not recognized because of an incorrect assumption that the 4 kV breakers would trip on overcurrent without DC control power.

E. CORRECTIVE ACTIONS

A detailed extent of condition evaluation was completed in March 2009 which confirmed that there are six (6) areas where power cable protection could potentially become disabled and result in a loss of significant equipment in areas beyond that postulated in the initiating fire area. The results of a risk significance evaluation completed on April 17, 2009, concluded that none of the cable configurations of concern resulted in a risk significance in excess of the red finding threshold established in the ROP process. When the aggregate risk significance was considered for the various configurations combined, the outcome was also a risk significance less than the red finding threshold.

Upon identifying the cable configurations of concern, twice-per-shift fire rounds were already being conducted in areas A23S (Auxiliary Feedwater Pump Room South), A24 (4160 V Vital Switchgear Room), A23N (Auxiliary Feedwater Pump Room North), A30 (Cable Spreading Room), A71 (Diesel Generator Building B Train), A01-A (Auxiliary Building, El. 8' and below) and A01-E (Turbine Building and South Service Building), thus addressing the reported condition, as well as the 5 additional areas from the extent of condition evaluation. Additional guidance for enhanced transient combustibles and hot work controls was also implemented.

Thermography of equipment in the affected zones was started in early August 2008 and completed during the first week of September. The purpose for the thermography was the early identification of equipment problems which could cause a fire in a fire area. The scope of the thermography included 12 transformers,

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111 pieces of equipment, such as electric motors and pumps, and 198 electrical cable enclosures such as control panels, distribution panels and switchgear. Only two instances of unexpected conditions were identified. Both were minor and are documented in the corrective action program. With the detailed identification of affected equipment complete and the development of inspection routes, thermography continues to be performed in the affected areas on a weekly basis. Plant modifications, as required, will be made as part of the transition to NFPA-805 to correct cable routing deficiencies.

F. SIMILAR OCCURENCES

LER 2005-002-00, "Unanalyzed Condition Due To Deficiency In Appendix R Safe Shutdown Strategy for Charging Pump Capability," dated August 8, 2005.

LER 2005-005-00, "Postulated Faults With Electrical Current In Excess of Maximum Interrupt Ratings and Nonconservative Technical Specification for Degraded Voltage Time Delay Relay Settings," dated November 11, 2005.

LER 2007-006-00, "Fire Inspection Analysis of Pressurizer Power-Operated Relief Valves and Block Valves," dated September 10, 2007.