April 26, 2018

NRC 2018-0015
10 CFR 50.73

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

Point Beach Nuclear Plant, Units 1 and 2
Docket 50-266 and 50-301
Renewed License Nos. DPR-24 and DPR-27

Licensee Event Report 266/2018-001-00

Enclosed is Licensee Event Report (LER) 266/2018-001-00 for Point Beach Nuclear Plant, Units 1 and 2. NextEra Energy Point Beach, LLC is providing this LER related to tornado missile protection for Units 1 and 2.

This letter contains no new regulatory commitments.

If you have any questions please contact Mr. Eric Schultz, Licensing Manager, at (920) 755-7854.

Sincerely,

NextEra Energy Point Beach, LLC

Robert Craven
Plant General Manager

Enclosure

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

NRC FORM 366 (04-2018) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 03/31/2020

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 Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@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)

(See Page 2 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

1. Facility Name	2. Docket Number	3. Page
Point Beach Nuclear Plant Unit 1	05000266	1 OF 3

4. Title

Inadequate Protection from Tornado Missiles Identified Due to Nonconforming Conditions

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
									Point Beach Unit 2	05000301
03	01	2018	2018	- 001	- 00	04	26	2018	Facility Name	Docket Number
									NA	NA

9. Operating Mode	11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: *(Check all that apply)*			
1	☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
	☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☒ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
	☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(iii)	☒ 50.73(a)(2)(ix)(A)
	☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
10. Power Level	☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☒ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
	☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☒ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
100	☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(C)	☐ 73.77(a)(1)
	☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☒ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(ii)
	☐ 20.2203(a)(2)(vi)	☒ 50.73(a)(2)(i)(B)	☒ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(iii)
		☐ 50.73(a)(2)(i)(C)	☐ Other (Specify in Abstract below or in NRC Form 366A	

12. Licensee Contact for this LER

Licensee Contact	Telephone Number (Include Area Code)
Eric Schultz, Point Beach Licensing Manager	(920) 755-7854

13. Complete One Line for each Component Failure Described in this Report

Cause	System	Component	Manufacturer	Reportable To ICES	Cause	System	Component	Manufacturer	Reportable To ICES
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

14. Supplemental Report Expected	15. Expected Submission Date	Month	Day	Year
☐ Yes (If yes, complete 15. Expected Submission Date) ☒ No				

Abstract (Limit to 1400 spaces, i.e., approximately 14 single-spaced typewritten lines)

On March 1, 2018, with Units 1 and 2 operating at 100% power, during evaluation of safe shutdown equipment for protection from the damaging effects of tornado missiles, Point Beach personnel initiated a condition report documenting a potential vulnerability for the turbine driven auxiliary feedwater pumps due to steam supply piping that is not routed through a Class I structure. Operations declared the affected equipment inoperable, implemented Enforcement Guidance Memorandum (EGM) 15-002, Enforcement Discretion for Tornado-Generated Missile Protection Noncompliance, Revision 1, and the required compensatory measures; and, returned the equipment to an operable-but-nonconforming status.

Subsequent to the condition identified on March 1, 2018, an extent of condition review documented additional equipment not fully protected by Class I structures, that are potentially vulnerable to tornado missiles. The additional equipment was declared inoperable, and returned to an operable-but-nonconforming status using EGM 15-002, Revision 1.

The identified nonconformances are legacy issues associated with the original plant design. Point Beach is pursuing a license amendment request to address tornado missile protection adequacy.

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Point Beach Nuclear Plant Unit 1	05000-266	2018	- 001	- 00

NARRATIVE

Description of the Event:

On March 1, 2018, with Units 1 and 2 operating at 100% power, during evaluation of safe shutdown equipment for protection from the damaging effects of tornado missiles, Point Beach personnel initiated a condition report documenting a potential vulnerability for the turbine driven auxiliary feedwater pumps due to steam supply piping that is not routed through a Class I structure.

Subsequent to the condition identified on March 1, 2018, on March 8, 2018, an extent of condition review documented additional equipment, required for safe shutdown, that is not fully protected by Class I structures that are potentially vulnerable to a tornado missile. The equipment identified as potentially vulnerable to tornado missile damage includes:

- Unit 1 and 2 turbine driven auxiliary feedwater pump system [BA] – for unprotected steam supply piping and unprotected turbine exhaust stacks
- Unit 1 and 2 Train B emergency diesel generators G03 and G04 [DG] – for unprotected fuel oil storage tank (T-175B) vent [DR] [TK]
- Unit 1 and 2 main steam isolation valves [SB] [ISV], main steam safety valves [SB] [RV] and atmospheric dump valves [SB] [PCV] - for lack of protection

Operations declared the affected equipment inoperable, implemented EGM 15-002, Revision 1, and the required compensatory measures; and, returned the affected equipment to an operable-but-nonconforming status within the Technical Specification Action Condition completion times.

Cause of the Event:

The identified nonconformances are legacy issues associated with original plant design. Due to the historical nature of this vulnerability, a specific cause has not been identified.

Analysis of the Event and Safety Significance:

During a postulated design basis tornado, the conditions documented could have resulted in a loss of safety function for the Unit 1 and 2 turbine driven auxiliary feedwater pump systems, main steam systems, and emergency diesel generators G03 and G04. The affected systems/components are used to achieve and maintain safe shutdown, remove decay heat, and mitigate the effects of postulated design-basis accidents.

As documented in EGM 15-002, Revision 1, tornado missile scenarios do not represent an immediate safety concern because their risk is bounded by the initiating event frequency and safety-related systems/structures/components are typically designed to withstand the effects of tornadoes. For a tornado missile induced scenario to occur, a tornado would have to strike the site and result in the generation of missiles that would hit and fail vulnerable, unprotected safety shutdown equipment and/or unprotected safety shutdown subcomponents in a manner that is non-repairable and non-recoverable. In addition, because plants are designed with redundancy and diversity, the tornado missiles would have to affect multiple trains of safety systems and/or means of achieving safe shutdown.

Also, as documented in EGM 15-002, Revision 1, the NRC has completed a generic risk analysis of potential tornado missile protection noncompliances to examine the risk significance. The assessment documented a conservative, bounding-type analysis of the risk significance for plant facilities that may not be in compliance with their tornado missile protection licensing. The generic analysis assumed that core damage would occur if a tornado were to strike a plant located in the most active tornado region in the country and that it caused a tornado-generated missile to fail all emergency core cooling equipment at the plant with no ability to recover. Given this conservative assumption , the NRC study concluded that the core damage frequency (CDF) associated with tornado missile-related noncompliances is well below the CDF threshold requiring immediate regulatory action.

In summary, the generic bounding risk analysis performed by the NRC concluded that this issue is of low risk significance.

Corrective Actions:

Immediate compensatory measures were implemented in accordance with the guidance in EGM 15-002, Revision 1, and Interim Staff Guidance, DSS-ISG-2016-01, Clarification of Licensee Actions in Receipt of Enforcement Discretion per Enforcement Guidance Memorandum EGM 15-002, Revision 1.

Comprehensive compensatory measures are under development and will be implemented within 60 days of the date of discovery of the initial nonconformances.

Long term resolution will include submittal of a license amendment request to resolve the identified legacy nonconformances.

Similar Events:

On June 25, 2012, Point Beach submitted Licensee Event Report (LER) 266/2012-001-00 applicable to both Units 1 and 2. The LER voluntarily reported a lack of tornado missile protection for the Train A emergency diesel generator (G01 and G02) exhaust stacks. The diesel generators were declared inoperable and a temporary modification was implemented to provide physical protection for the exhaust stacks. The diesel generators were returned to service within the Technical Specification Action Condition completion time.

Component Failure Data:

None