



January 19, 2015

NRC 2015-0006  
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 266/2015-001-00  
Inadequately Sealed Pipe Penetrations Result in an Unanalyzed Condition for Internal Flooding

Enclosed is Licensee Event Report (LER) 266/2015-001-00 for Point Beach Nuclear Plant, Units 1 and 2. NextEra Energy Point Beach, LLC, is providing this LER to report an identified past unanalyzed condition.

This letter contains no new regulatory commitments.

If you have any questions please contact Mr. Michael Millen, Licensing Manager, at (920) 755-7845.

Very truly yours,

NextEra Energy Point Beach, LLC

A handwritten signature in black ink that reads "Eric McCartney". The signature is written in a cursive, flowing style.

Eric McCartney  
Site Vice President

Enclosure

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



**LICENSEE EVENT REPORT (LER)**

(See Page 2 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 FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [Infocollections.Resource@nrc.gov](mailto:Infocollections.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.

<b>1. FACILITY NAME</b> Point Beach Nuclear Plant Unit 1	<b>2. DOCKET NUMBER</b> 05000266	<b>3. PAGE</b> 1 OF 3
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**4. TITLE**  
Inadequately Sealed Pipe Penetrations Result in Unanalyzed Condition for Internal Flooding

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTI AL NUMBER	Rev NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
11	19	14	2015	001	00	01	19	2015	Point Beach Unit 2	05000301
									FACILITY NAME	DOCKET NUMBER

<b>9. OPERATING MODE</b>	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)</b>			
1	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input checked="" 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)
<b>10. POWER LEVEL</b>	<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)
100%	<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 checked="" 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 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**

FACILITY NAME Lori Christensen, Licensing Project Manager	TELEPHONE NUMBER (Include Area Code) (920) 755-7654
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**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
B	N/A	N/A	N/A	N/A					

<b>14. SUPPLEMENTAL REPORT EXPECTED</b>	<b>15. EXPECTED SUBMISSION DATE</b>	MONTH	DAY	YEAR
NO				

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

On November 19, 2014, inadequately sealed piping penetrations were discovered in the Residual Heat Removal (RHR) [BP] piping and valve gallery walls that could have allowed a postulated flooding event to potentially impact both RHR pumps. The same configuration was identified on both Units. Following analysis of the postulated leakage sources and flow paths, it was discovered that there was a time when an unacceptable volume of flood water could have entered the pipe and valve gallery areas challenging operation of the RHR pumps. It was determined that this condition no longer existed as of December 16, 2014, when changes had been made to Operations flood mitigation strategies, and upon installation of seals in upstream pipeway trenches to eliminate certain leakage paths into the RHR pipe and valve gallery areas. Therefore, this item is being reported as a past unanalyzed condition.



**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

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1. FACILITY NAME  Point Beach Nuclear Plant Unit 1	2. DOCKET  05000266	6. LER NUMBER			3. PAGE  2 OF 3
		YEAR	SEQUENTIAL NUMBER	REV NO.	
		2015	— 001	— 00	

**NARRATIVE**

**Description of the Event:**

On November 19, 2014, Point Beach Units 1 and 2 were operating in Mode 1 at 100 percent reactor power. Following a plant walkdown, a Nuclear Regulatory Commission inspector questioned the adequacy of a sealant in a Unit 2 through wall pipe penetration separating the Unit 2 Train A and Train B Residual Heat Removal (RHR) piping and valve galleries, specifically questioning the potential impact as a flood barrier. Subsequently, on November 21, 2014, an entry was made to inspect this area in both Units. In Unit 2, the entry confirmed the pipe penetration sealant around four 3/4 inch diameter seal cooling lines for the RHR pump as being cracked, but generally tight with minimal gaps. Inspection of the Unit 1 seal cooling lines at this same location identified gaps around the piping that were not adequately sealed. Additionally, seismic qualification of the penetration seal material was called into question. Consequently, both Units were concluded to have degraded pipe penetrations at this location.

The inadequately sealed penetrations allow a leakage path between the Train A RHR pipe and valve gallery and the Train B pipe and valve gallery. The pipe and valve galleries communicate with their respective RHR pump cubicle. This configuration is similar on both Units.

A Prompt Operability Determination was completed in December 2014 that concluded an operable-but-nonconforming condition existed, crediting installation of seals in upstream pipeway trenches and a compensatory measure that was already in place to isolate a bounding internal flood source.

A review of the combined effects from the inadequately sealed pipe penetrations, in combination with various postulated upstream flooding sources and conveyance paths, including past conditions that had since been corrected, could not conclusively determine that the RHR pumps would not be challenged by internal flooding. It was determined that this condition no longer existed as of December 16, 2014, when changes had been made to Operations flood mitigation strategies and after seals had been installed in upstream pipeway trenches eliminating certain leakage paths into the RHR pipe and valve gallery area. Consequently, it was determined that this is an unanalyzed condition that has since been corrected.

**Cause of the Event:**

The inadequately sealed pipe penetrations are legacy conditions existing from original construction. The past condition of the inadequately sealed piping penetrations, in combination with the various postulated upstream flooding sources and conveyance paths, could have allowed an unacceptable volume of water into the RHR pump cubicles.

This postulated event could have challenged operation of the RHR pumps during Modes 4, 5 and 6, when relying on RHR for decay heat removal.

**Analysis of the Event:**

This condition was determined to be reportable in accordance with 10 CFR 50.73(a)(2)(ii)(B), an unanalyzed condition occurring in the past three years that significantly degraded plant safety, 50.73(a)(2)(v)(B), a condition that could have prevented the fulfillment of the safety function to remove residual heat and 50.73(a)(2)(vii)(B), an event where a single cause or condition could result in two independent trains to become inoperable in a single system designed to remove residual heat.



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The RHR pumps do not have a safety function to achieve or maintain safe shutdown to mitigate a flood event in Modes 1, 2 and 3.

In Modes 4, 5 and 6, the RHR pumps have a Technical Specification required function to provide decay heat removal. The function to remove decay heat in Modes 4, 5 and 6 is required to be maintained during flooding events.

This event did not result in the actual loss of any safety function as a flooding event did not occur. However, prior to December 16, 2014, it was determined that the station was in an unanalyzed condition with regard to providing flood protection for the RHR pumps for both Units.

**Safety Significance:**

This unanalyzed condition could have prevented the fulfillment of the safety function to remove decay heat. The inadequately sealed penetrations in a wall separating the Train A and B RHR pipe and valve galleries had the potential to adversely impact the function of both RHR pumps due to flooding events. The significance of the issue was primarily limited to times when the plant was in Mode 4, 5, or 6 and relying on RHR for decay heat removal. In Modes 1, 2, or 3, and during Mode 4 when relying on the Reactor Coolant System (RCS) [AB] loops for decay heat removal, the plant would use, and continue to use, steam generators and auxiliary feedwater (AFW) [BA] to remove decay heat. In Mode 4, when relying on RHR, and in Modes 5 and 6, the plant had operational procedures to recover from a degraded RHR System and recover from a loss of RHR. These procedures make use of existing equipment that would have been available during the postulated flood, such as Safety Injection pumps, Charging pumps, Steam Generators, and AFW pumps. Operators are trained in responding to a loss of decay heat removal in these plant conditions and there is adequate procedure guidance and time available for operators to maintain decay heat removal.

Due to the low frequency of occurrence of the flooding events that would contribute to the risk, the limited exposure time when RHR was relied upon for decay heat removal, the procedurally-driven mitigation actions, and the time available to perform those actions, this condition was determined to be of very low safety significance.

**Corrective Actions:**

1. The Primary Auxiliary Building pipeway trenches were previously sealed eliminating certain leakage paths to the RHR pipe and valve galleries and Operations flood mitigation strategies were revised. Additional pipeway trench seals or similar flood barriers are being installed to further limit internal leakage conveyance paths.

**Failed Component(s):**

No components failed as a result of this past condition.

**Similar Events:**

None.