



**Wisconsin  
Electric**  
POWER COMPANY

Point Beach Nuclear Plant  
6610 Nuclear Rd., Two Rivers, WI 54241

(414) 755-2321

NPL 97-0311

May 30, 1997

Document Control Desk  
U.S. NUCLEAR REGULATORY COMMISSION  
Mail Station P1-137  
Washington, D. C. 20555

Ladies/Gentlemen:

DOCKETS 50-266 AND 50-301  
LICENSEE EVENT REPORT 97-021-00  
SPENT FUEL POOL COOLING SYSTEM NOT  
IN ACCORDANCE WITH PLANT DESIGN BASIS  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Enclosed is Licensee Event Report 97-021-00 for Point Beach Nuclear Plant, Units 1 and 2. This report is provided in accordance with 10 CFR 50.73(a)(2)(ii)(B), "Any event or condition that resulted in the nuclear power plant being in a condition that was outside the design basis of the plant." This report describes the identification of a non-conforming condition whereby seismic Class II and III spent fuel pool purification piping is separated from Class I piping by normally open manual valves. This is contrary to PBNP Final Safety Analysis Report (FSAR), Appendix A, which states that the interface between a Class I system and lower class system is at a normally closed valve or a valve which is capable of remote operation from the control room.

Please contact us if you require additional information.

Sincerely,

D. F. Johnson  
Manager, Regulatory Services & Licensing

DAW/lam

Enclosure

9706050221 970530  
PDR ADOCK 05000266  
S PDR

cc: NRC Resident Inspector  
NRC Regional Administrator



## LICENSEE EVENT REPORT (LER)

(See reverse for required number of  
digits/characters for each block)ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH  
THIS INFORMATION COLLECTION REQUEST: 50.0 HRS.  
REPORTED LESSONS LEARNED ARE INCORPORATED INTO  
THE LICENSING PROCESS AND FED BACK TO INDUSTRY.  
FORWARD COMMENTS REGARDING BURDEN ESTIMATE  
TO THE INFORMATION AND RECORDS MANAGEMENT  
BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY  
COMMISSION, WASHINGTON, DC 20555-0001, AND TO  
THE PAPERWORK REDUCTION PROJECT

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Point Beach Nuclear Plant, Unit 1	05000266	1 OF 4

TITLE (4)  
Spent Fuel Pool Cooling System Not In Accordance With Plant Design Basis

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
04	30	97	97	-- 021	-- 00	05	30	97	Unit 2	05000301
									FACILITY NAME	DOCKET NUMBER
										05000
OPERATING MODE (9)		N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)							
POWER LEVEL (10)		0	20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)	
			20.2203(a)(1)		20.2203(a)(3)(i)		X 50.73(a)(2)(ii)		50.73(a)(2)(x)	
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71	
			20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER	
			20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below	
			20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		or in NRC Form 366A	

LICENSEE CONTACT FOR THIS LER (12)	
NAME	TELEPHONE NUMBER (Include Area Code)
David Weaver	(414) 221-3418

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO						

## ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On April 30, 1997, while Point Beach Nuclear Plant (PBNP) Unit 1 was in cold shutdown and Unit 2 was shut down and defueled during its ongoing refueling outage, two interfaces between seismic Class I and seismic Class II/III piping in the spent fuel pool cooling system were identified as being accomplished via normally open manual valves. This is contrary to the PBNP Final Safety Analysis Report (FSAR), Appendix A, which requires interfaces between Class I systems and lower class systems to be at a normally closed valve or a valve which is capable of remote operation from the control room. Since these manual boundary valves were maintained in the open position, the plant was in a condition outside its design basis. The valves were immediately closed and tagged shut. An operability determination concluded that the spent fuel pool cooling system is operable. A 4-hour report to the NRC was made under 10 CFR 50.72. The NRC resident inspectors were also notified.

**LICENSEE EVENT REPORT (LER)**  
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Point Beach Nuclear Plant, Unit 1	05000266	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 4
		97	- 021	- 00	

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

**Event Description:**

On April 30, 1997, Point Beach Nuclear Plant (PBNP) Unit 1 was in cold shutdown and Unit 2 was shut down and defueled during its ongoing refueling outage. During an April 21, 1997, Manager's Supervisory Staff (MSS) meeting discussion regarding the re-design of the dry fuel storage cask reflood system, the question was raised as to the seismicity of spent fuel pool cooling system piping that the new system would be tied in to. The spent fuel pool cooling system is designated as seismic Class I. The piping for the spent fuel pool purification loop which interfaces with Class I piping is designed as seismic Class II and Class III. Point Beach Final Safety Analysis Report (FSAR), Appendix A, states that the interfaces between Class I systems and lower class systems are at a normally closed valve or a valve which is capable of remote operation from the control room. During follow-up evaluation on April 30, it was identified that the boundary between these seismic classes is at normally open manual valves SF-27 and SF-28. Since these manual boundary valves were maintained in the open position, the plant was in a condition outside its design basis. The valves were immediately closed and red-tagged shut. An operability determination concluded that the spent fuel pool cooling system is operable. A 4-hour report to the NRC was made under 10 CFR 50.72. The NRC resident inspectors were also notified.

**System Description:**

The spent fuel pool cooling system, common to Units 1 and 2, is designed to remove decay heat from fuel assemblies stored in the spent fuel pool after removal from the reactor vessel. The system consists of two separate cooling trains, with a common suction and return header, each having an identical heat exchanger and pump. When purification is required, a portion of the flow is diverted through the interconnecting spent fuel pool purification system.

**Cause:**

This condition is known to have existed since modifications were performed on the spent fuel pool cooling system in 1977, but also may have existed prior to that time. However, the specific criteria for seismic class piping separation in place at that time have not been identified.

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

**Corrective Actions:**

Valves SF-27 and SF-28 were immediately closed and red-tagged shut to bring the system in compliance with its design basis.

The basis for the FSAR, Appendix A, seismic class separation criteria is being investigated.

System walkdowns have been conducted. Further corrective actions, if necessary, will be determined based upon evaluation of design basis and system walkdown information.

**Reportability:**

This Licensee Event Report is being submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(ii)(B), "Any event or condition that resulted in the nuclear power plant being in a condition that was outside the design basis of the plant."

**Safety Assessment:**

The probability of draining the water from the spent fuel pool cooling loop in the event of a piping failure is exceedingly low. In the unlikely event of the spent fuel pool cooling loop being drained, the spent fuel pool itself cannot be drained and no spent fuel is uncovered since the spent fuel pool cooling connections contain siphon breakers that would limit water draindown to 3 feet below the normal water level. In the event of complete failure of the cooling system for a long period of time, the fuel pool inventory can be maintained with fire suppression system water. Therefore, the health and safety of plant personnel and the general public were not impacted by this event.

**Similar Occurrences:**

The following events have been reported involving systems being outside of their seismic design bases:

<u>LER</u>	<u>TITLE</u>
266/94-005-00	Unit 1 Reactor Cavity Cooling Fans In A Condition Outside Of Design Basis
301/92-002-00	Radioactive Waste Disposal System Component Cooling Water Isolation Valves Outside Design Basis

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

Condition Report 96-650 documented a similar plant condition that was identified on August 29, 1996. While performing an evaluation of recent industry events surrounding refueling water storage tank (RWST) recirculation activities and requirements for applicability to PBNP, a condition was identified where the refueling water recirculation pump and its associated piping were aligned on a regular basis to perform RWST recirculation and purification. This section of piping can not be automatically isolated from the RWST. The system has been determined to be operable. We are currently evaluating the seismic adequacy of the piping. Final system modifications and/or piping qualifications will be completed by December 31, 1997. Although this condition was initially screened as not being regulatory reportable based on Technical Specifications compliance, we will submit an LER reporting this identified condition as not being in accordance with the plant's design basis.