

## 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)

Point Beach Nuclear Plant, Unit 2

DOCKET NUMBER (2)

05000301

PAGE (3)

1 OF 4

TITLE (4)

Containment Liner Clearance 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
01	07	97	97	-- 001 --	00	02	06	97	FACILITY NAME	DOCKET NUMBER 05000
OPERATING MODE (9)		N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8: (Check one or more) (11)							
POWER LEVEL (10)		000	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)(iii)		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

David Weaver

TELEPHONE NUMBER (Include Area Code)

(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)

YES

(If yes, complete EXPECTED SUBMISSION DATE):

X

NO

EXPECTED  
SUBMISSION  
DATE (15)

MONTH DAY YEAR

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

On January 7, 1997, while Point Beach Nuclear Plant (PBNP) Unit 2 was shut down and defueled during its annual refueling outage, plant personnel identified one location where the clearance between internal Unit 2 containment structures and the containment liner was not in accordance with the plant design basis. During a containment inspection/walkdown of Unit 2, plant personnel noted that the Unit 2 "A" containment accident fan platform was in contact with the containment liner located opposite to an indicated void between the containment liner and concrete containment structure. This configuration could have resulted in a containment breach during a safe shutdown earthquake which is contrary to the plant design basis. The Unit 2 containment structure was immediately declared inoperable. Plant engineers walked down the remainder of the Unit 2 containment and documented eight additional locations of concern. The Unit 1 containment was also inspected, and although several areas of concern were identified, further evaluations determined the Unit 1 containment to be operable.

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

**Event Description:**

On January 7, 1997, while Point Beach Nuclear Plant (PBNP) Unit 2 was shut down and defueled during its annual refueling outage, plant personnel identified one location where the clearance between internal Unit 2 containment structures and the containment liner was not in accordance with the plant design basis.

During a containment inspection/walkdown of Unit 2, plant personnel noted that the Unit 2 "A" containment accident fan platform was in contact with the containment liner located opposite to an indicated void between the containment liner and concrete containment structure. This configuration could result in a breach of containment during a safe shutdown earthquake due to differential movement and subsequent penetration of the structure through the liner. This is contrary to the plant design basis which states the containment structural members are designed to accept a combination of normal operating loads and safe shutdown earthquake (SSE) loads without exceeding specified stress limits

The Unit 2 containment was immediately declared inoperable. Plant engineers walked down the remainder of Unit 2 containment and documented eight additional locations with smaller than expected clearances. However, they determined that the associated structures/components would not promote damage to the liner.

The decision was made to assess the operability of the Unit 1 containment structure. Plant engineers entered Unit 1 containment on January 7, 1997, and identified 12 locations of concern. A prompt operability review determined that the Unit 1 containment was operable based upon the structural design and configuration of the associated structures.

**Component and System Description:**

The reactor containment structure is a right cylinder with a flat base and a shallow domed roof. A 1/4 inch thick steel liner is attached to the inside face of the concrete shell to ensure a high degree of leak tightness. The base liner is installed on top of the structural slab and is covered with concrete. The structure provides biological shielding for both normal and accident conditions.

The reactor containment is designed as a seismic Class 1 structure. Class 1 structures and components are those whose failure might cause or increase the severity of a loss-of-coolant accident or result in an uncontrolled release of excessive amounts of radioactivity. Class 1 structures and components also include those which are vital to the safe shutdown and isolation of the reactor. The containment structural members are designed to accept a combination of normal operating loads and safe shutdown earthquake (SSE) loads without exceeding specified stress limits.

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

**Corrective Actions:**

The Unit 2 containment was immediately declared inoperable. A prompt operability review determined the Unit 1 containment to be operable.

All identified Unit 2 containment liner clearance deficiencies will be resolved prior to Unit 2 core load, currently scheduled to commence on February 13, 1997.

The Unit 1 containment liner clearance deficiencies will be corrected during the next Unit 1 refueling outage, which is currently scheduled to commence on May 9, 1997.

**Cause:**

Further review of this plant configuration identified that all containment liner clearance deficiencies have existed since original plant construction.

**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." A 4-hour report to the NRC was made for Unit 2 under 10 CFR 50.72(b)(2)(i). The NRC resident inspectors were also notified.

**Safety Assessment:**

This event involved the potential breach of the containment liner due to contact from structural members during a seismic event. Of the nine areas of concern for Unit 2, eight were determined to not be safety significant due to the design of the involved structural members. Based on engineering judgment, if these members would have contacted the containment liner during a seismic event, the members would have buckled prior to damaging the containment liner.

However, it was determined that the support structure for the containment accident recirculation fan (2-W1A1) and the containment cooling fan (2-W1A2) could have punctured the containment liner during a safe shutdown earthquake. Connecting bolts on the structure are located opposite to an indicated void between the containment liner and the concrete containment structure. Had this caused a breach in containment during a seismic event coincident with a loss-of-coolant accident (LOCA), a radiological release could have resulted. However, the probability of a safe shutdown earthquake occurring at PBNP within 24 hours following a LOCA is  $1.3E-9$  per year, or once every 769,230,769 years. Therefore, this plant condition created essentially no additional risk to plant personnel and the general public.

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**Similar Occurrences:**

No previous events have been identified involving the containment structure being outside of its design basis.