



231 W Michigan, P.O. Box 2046, Milwaukee, WI 53201-2046

(414) 221-2345

VPNPD-94-076

NRC-94-053

August 12, 1994

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

Gentlemen:

DOCKETS 50-266 AND 50-301
LICENSEE EVENT REPORT 94-007-00
BREACH OF CONTAINMENT INTEGRITY DURING VALVE TESTING
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Enclosed is Licensee Event Report 94-007-00 for Point Beach Nuclear Plant, Units 1 and 2. This report is being submitted in accordance with 10 CFR 50.73(a)(2)(i), "Any operation or condition prohibited by the plant's Technical Specifications." The report describes a condition where containment integrity was not met during inservice valve testing.

If you require additional information, please contact us.

Sincerely,

Bob Link

Bob Link
Vice President
Nuclear Power

FDP/jg

cc: NRC Resident Inspector
NRC Regional Administrator

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A subsidiary of Wisconsin Energy Corporation

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. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

Point Beach Nuclear Plant, Units 1 and 2

DOCKET NUMBER (2)

05000266

PAGE (3)

1 OF 5

TITLE (4)

Containment Integrity Requirements Not Satisfied During Valve Testing

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
07	13	94	94	-- 007 --	00	08	12	94	PBNP Unit 2	05000301
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)						
POWER LEVEL (10)	100	20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)
		20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)
		20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER
		20.405(a)(1)(iii)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		(Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		
		20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME

Kenneth V. Arneson, Senior Engineer - Licensing

TELEPHONE NUMBER (Include Area Code)

(414) 221-3362

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	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
(If yes, complete EXPECTED SUBMISSION DATE).	X				

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

On July 13, 1994, it was discovered that, during inservice stroke testing of the low head safety injection (SI) suction valves, 1(2)SI-850A and 1(2)SI-850B, a drain and vent path between the Unit 1 or Unit 2 SI-850 and SI-851 valves is opened to the Plant Auxiliary Building (PAB). When the SI-850 valves are stroked open, a direct path exists between the containment atmosphere and the PAB. As such, during the stroke test of 1(2)SI-850A or 1(2)SI-850B, containment integrity is not maintained as required by Point Beach Nuclear Plant's Technical Specifications (TS). Test procedures are being modified to station a dedicated operator at the drain valve during testing to shut the valve if an event occurs requiring containment isolation.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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		94	-- 007 --	00	

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

Event Description:

On July 13, 1994, it was discovered that, during inservice stroke testing of the low head safety injection (SI) suction valves, 1(2)SI-850A and 1(2)SI-850B, a drain and vent path between the Unit 1 or Unit 2 SI-850 and SI-851 valves is opened to the Plant Auxiliary Building (PAB). When the SI-850 valves are stroked open, a direct path exists between the containment atmosphere and the PAB. As such, during the stroke test of 1(2)SI-850A or 1(2)SI-850B, containment integrity is not maintained as required by Point Beach Nuclear Plant's Technical Specifications (TS).

The Inservice Test (IT) procedures that result in the formation of a path between the containment atmosphere and the PAB are as follows:

- IT-40, "Safety Injection Valves (Quarterly) Unit 1"
- IT-40A, "Safety Injection Valves 1SI-850A&B (Quarterly, Increased Frequency) Unit 1"
- IT-45, "Safety Injection Valves (Quarterly) Unit 2"
- IT-45A, "Safety Injection Valves 2SI-850A&B (Quarterly, Increased Frequency) Unit 2"

IT-40 and IT-45 are used to perform a quarterly inservice test of the SI-850 valves, as required by the ASME Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components." IT-40A and IT-45A perform the same inservice tests at a more frequent interval.

In each of these procedures, the train-specific containment sump B inlet drain valve, 1(2)SI-D14 or 1(2)SI-D15, the containment sump B common inlet drain wet pipe valve 1(2)SI-D17, and the containment sump B common inlet vent valve 1(2)SI-V5 are opened prior to stroking the SI-850 suction valve. All of these vent and drain valves are located outside of containment. After the suction valve is cycled, the vent valve, 1(2)SI-V5, and the applicable drain valve, 1(2)SI-D14 or 1(2)SI-D15, are shut. During the period of time when the SI-850 valve is open during the stroke test, containment integrity is not met.

Component and System Description:

1(2)SI-850A and 1(2)SI-850B are the residual heat removal (RHR) pump suction valves for sump B. There is one valve associated with each RHR pump, and both are located inside containment in sump B. These are normally closed, ten inch valves and are used during the recirculation phase, following a loss of coolant accident. Drain valves 1(2)SI-D14,

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

1(2)SI-D15, and 1(2)SI-D17 and vent valve 1(2)SI-V5 are normally locked closed, 3/4 inch valves.

TS 15.3.6.A(a) states, "The containment integrity (as defined in TS 15.1) shall not be violated when a nuclear core is installed in the reactor unless the reactor is in the cold shutdown condition."

TS 15.1.d states, "Containment integrity is defined to exist when:

- 1) All non-automatic containment isolation valves and blind flanges are closed as required.
- 2) The equipment hatch is properly closed.
- 3) At least one door in each personnel air lock is properly closed.
- 4) All automatic containment isolation valves are operable or are secured closed.
- 5) The uncontrolled containment leakage satisfies Specification 15.4.4."

TS 15.4.4 states that the total leakage from Type "B" and "C" tests shall not exceed 0.6La. Type B and C tests measure leakage across individual containment penetrations. The allowable leakage for PBNP is 0.4% (weight) per day at the containment design pressure of 60 psig. The largest pipe diameter of the vent and drain path opened during the valve stroke testing is 3/4 inch. A calculation has determined that leakage through a 3/4-inch hole will exceed the value of 0.6La at containment design pressure.

Cause:

It has been determined that this condition has existed since these inservice test procedures were originally issued. Plant personnel did not realize that the configuration of the drain and vent valves during the stroke test of the SI-850 valves violated containment integrity. Procedures IT-40 and IT-45 were originally issued on August 1, 1977. Procedures IT-40A and IT-45A were originally issued on December 5, 1980.

Corrective Action:

Subsequent to the discovery of the condition a condition report was initiated on July 13, 1994. This report was used to document the condition and initiate corrective action. A review of the event was performed in response to this condition report.

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As a result of this review, procedures IT-40, IT-40A, IT-45, and IT-45A will be revised to require stationing a dedicated operator at drain valves 1(2)SI-D14 or 1(2)SI-D15 when either of these valves are open during the associated procedure. The dedicated operator would be required to shut the associated drain valve should an event occur that would require containment isolation, thereby restoring containment integrity. We anticipate completing these procedure revisions by September 23, 1994, prior to the next scheduled test.

Additionally, Technical Specification Change Request 163 was submitted to the NRC on November 23, 1993. This change request was submitted in order to propose revisions that will clarify operability requirements for containment penetrations. The proposed revisions in this change request are similar to specifications included in the Westinghouse Owner's Group Improved Standard Technical Specifications (NUREG 1431). This change request will allow intermittent operation of valves associated with containment penetrations if a dedicated operator is stationed at the penetration to isolate it should an event occur which requires containment isolation.

Reportability:

This licensee event report is being submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(i), "Any operation or condition prohibited by the plant's Technical Specifications."

Safety Assessment:

During the period of time when the identified inservice test procedures are performed and either 1(2)SI-850A or 1(2)SI-850B is stroked open, a 3/4 inch path is established from containment, through the open SI-850 valve, through the open vent and drain path, into the PAB. This is a violation of containment integrity and results in an unmonitored release path into the PAB. However, 1(2)SI-850A or 1(2)SI-850B are open for only a short period of time during these tests. Additionally, 1(2)SI-850A and 1(2)SI-850B are hydraulically-operated valves that could have been shut had it been necessary to isolate the affected containment penetration. It would have also been possible to isolate the affected containment penetration by manually shutting the associated vent and drain valves.

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Similar Occurrences:

A review licensee event reports was performed to identify other reports that describe violations of containment integrity during routine testing or other evolutions. The following licensee event reports were identified:

- 266/85-008-00 Loss of Containment Integrity (Airlock Interlock Failure)
- 301/93-001-00 Failure of Steam Generator Sample Isolation Valve to Fully Shut
- 301/81-003-00 AOV-2083, Steam Generator Sample Line Isolation Valve Fails to Shut