Wisconsin Electric
POWER COMPANY

231 W. Michigan, P.O. Box 2046, Milwaukee, WI 53201 (414) 221-2345

VPNPD-93-105
NRC-93- 064

10 CFR 50.73

May 17, 1993

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 93-006-00
CONTAINMENT ISOLATION VALVE NOT LEAK TESTED
IN ACCORDANCE WITH TECHNICAL SPECIFICATION REQUIREMENTS
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Enclosed is Licensee Event Report 93-006-00 for Point Beach Nuclear Plant, Units 1 and 2. This report is provided in accordance with 10 CFR 50.73(a)(2)(i)(B), "The licensee shall report...any operation or condition prohibited by the plant's Technical Specifications."

This report describes the discovery of a containment isolation valve which was not included in a leak testing program as required by Technical Specification 15.4.4.III, "Type C Tests."

Please contact us if any further information is required.

Sincerely,

Bob Link
Vice President
Nuclear Power

DAW/jg

Enclosure

cc: NRC Resident Inspector
NRC Regional Administrator

240035

JE22 1/1

NRC FORM 366 (6-89)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Point Beach Nuclear Plant, Unit 1	0 5 0 0 0 2 6 6	1 OF 0 6

TITLE (4) Containment Isolation Valve not Leak Tested in Accordance with Technical Specification Requirements

EVENT DATE (5) MONTH	DAY	YEAR	LER NUMBER (6) YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	REPORT DATE (7) MONTH	DAY	YEAR	OTHER FACILITIES INVOLVED (8) FACILITY NAMES	DOCKET NUMBER(S)
0 4	1 6	9 3	9 3	— 0 0 6 —	0 0	0 5	1 7	9 3	Unit 2	0 5 0 0 0 3 0 1
										0 5 0 0 0

OPERATING MODE (9): N

POWER LEVEL (10): 0 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

[ ] 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 (Specify in Abstract below and in Text, NRC Form 366A)
[ ] 20.405(a)(1)(iii)	[X] 50.73(a)(2)(i)	[ ] 50.73(a)(2)(viii)(A)	
[ ] 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	TELEPHONE NUMBER AREA CODE	
David A. Weaver, Sr. Engineer-Licensing	4 1 4	2 2 1 - 3 [illegible] 1 8

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 fifteen single-space typewritten lines) (16)

On April 16, 1993, with Unit 1 in a refueling shutdown condition and Unit 2 operating at 100% power, we discovered that outside Containment Isolation Valve CV-00369A on Penetration P-10 for both units was not included in our 10 CFR 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," Type C leakage testing program as required by Technical Specification 15.4.4.III.D. Redundant outside Containment Isolation Valve 1CV-00369B for PBNP Unit 1 was also found with excessive leakage. Subsequent inspection revealed that Check Valve 1CV-00369B had a 1/16 inch hole machined into its disk (as specified by valve model design). The hole in the disk was determined to be the cause for the leakage previously identified. Further investigation revealed that the wrong model valve was installed as part of a modification performed in 1972. The model number for the installed valve was virtually identical to the model number of the check valve designed for the modification except for one character. Valve 1CV-00369B was replaced and a test connection was added to allow leak testing of Valve 1CV-00369A. Penetration 10 (encompassing Valves CV-00369A&B) also has inside containment automatic Isolation Valve CV-00371A which is Appendix J tested. A modification will be performed during the next scheduled Unit 2 refueling outage to add a test connection to allow Appendix J testing of Valve 2CV-00369A. Valve 2CV-00369B was inspected and it appears that the proper valve was installed. However, this will be verified during the next scheduled Unit 2 refueling outage. The NRC Resident Inspector was notified of this event.

EVENT DESCRIPTION
(Please refer to the attached figure)

On April 6, 1993, Maintenance personnel initiated Maintenance Work Request (MWR) 931656 to investigate boric acid build-up on the socket weld between the pipe and the outboard side of Containment Isolation Valve 1CV-00369A. Upon inspection on April 15, 1993, workers found that a crack in the socket weld was responsible for the boric acid build-up. Workers performing this MWR also recalled a previous MWR, initiated on April 16, 1992, which performed a special test to determine the leak rate through Containment Isolation Valves 1CV-00369A and 1CV-00369B. That test revealed through-leakage of 10.5 gpm on Check Valve 1CV-00369B. At that time, Valve 1CV-00369B was not correctly identified as a redundant outside containment isolation valve, and no further action was taken.

As the workers inspected the cracked weld on Valve 1CV-00369A, they decided to also inspect Valve 1CV-00369B (due to its close proximity to Valve 1CV-00369A) to determine the cause of the through-leakage detected on April 16, 1992. The workers discovered that Check Valve 1CV-00369B had a 1/16 inch hole machined into its disk (as specified by valve model design). The hole in the disk was determined to be the cause for the leakage previously identified. Subsequent investigation revealed that the wrong model valve was installed as part of a modification performed in 1972. The model number for the installed valve was virtually identical to the model number of the check valve designed for the modification except for a one character difference.

Containment Isolation Valves 1CV-00369A and 1CV-00369B are isolation valves associated with Containment Penetration P-10 (Refer to FSAR Figure 5.2-10, attached). This penetration configuration is identical for PBNP Units 1 and 2.

Penetration P-10 is classified as a Class 1 penetration as defined in FSAR Section 5.2, "Containment Isolation System." This class of penetration, normally operating outgoing lines connected to the reactor coolant system, is required to have at least one automatically operated trip valve and one manual valve in series located outside containment. Normally closed manually operated valves which are locked closed or under administrative control during power operation qualify as automatic isolation valves.

For Penetration P-10, Valve CV-00369A is normally locked closed which qualifies it as an automatic trip valve in accordance with Note 3 in FSAR Section 5.2.2, "System Design." Therefore, Valve CV-00369A should be leak tested in accordance with Technical Specification Section 15.4.4.III, "Type C Tests," Specification A.3.a, and 10 CFR 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," (hereinafter referred to as "Appendix J") requirements. Valve CV-00369B is not required to be leak tested.

NRC FORM 366A (6-89)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104 EXPIRES 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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Point Beach Nuclear Plant, Unit 1	0 5 0 0 0 2 6 6	9 3	— 0 0 6	— 0 0	0 3 OF 0 6

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

The original configuration of the Penetration P-10 did not include automatic Containment Isolation Valve CV-00371A inside containment. This valve was added as a post-TMI upgrade in response to NUREG-0737.

Plant records were reviewed to determine the leak rate history on Valve 1CV-00369B. However, since this valve is not required to be Type C leak tested, leak rate history could not be determined.

We also discovered during this review that Containment Isolation Valve CV-00369A on both Units 1 and 2 was also not being Appendix J, Type C tested.

The lack of proper Appendix J testing of Valve CV-00369A was reviewed for operability concerns. There is no operability concern for the following reasons:

1) This valve is locked closed during power operations (duplicating the effect of an automatic valve with a trip signal). Penetration P-10 also has an Appendix J tested automatic isolation valve, CV-00371A, inside containment.

2) While not individually Appendix J tested, Valve CV-00369A is closed and serves as part of the Appendix J test pressure boundary during the test of outside Containment Isolation Valve CV-00371. In addition, this branch of Penetration P-10 connects to the RHR system which is a closed system outside containment and serves as a containment boundary.

Our immediate corrective action was to replace Check Valve 1CV-00369B. This modification also included installation of a test connection to allow Valve 1CV-00369A to be Appendix J, Type C leak tested. The modification was performed and Valve 1CV-00369B was replaced with a new valve with a solid disk. A modification will be performed during U2R19 to add a test connection to allow Appendix J leak testing of the corresponding Unit 2 Valve 2CV-00369A.

Valve 1CV-00369A was subsequently leak tested with acceptable results. Valve 2CV-00369B was inspected and it appears that the proper valve was installed. However, this will be verified during U2R19.

We evaluated the feasibility of classifying Check Valve CV-00369B as an automatic valve for this penetration. This would have allowed the opening of Valve CV-00369A when above 200°F. To allow the proposed re-classification, Valve 1CV-00369B was required to pass a leak test in accordance with Appendix J. A leak test was performed. However, Valve 1CV-00369B leaked in excess of PBNP administrative limits (but less than Technical Specification limits). Since the Residual Heat Removal (RHR) system connection to the letdown line is not required to be open at

RCS temperatures greater than 200°F, we decided that the proposed change to re-classify Check Valve 1CV-00369B as an automatic valve for this penetration was not desirable. Therefore, locked-closed manual Valves 1&2CV-00369A will continue to be classified as the automatic valves outside containment for this branch of Penetration P-10.

Operating procedures were reviewed to determine if changes were needed to restrict the opening of Valve 1CV-00369A above 200°F RCS temperature. We determined that procedural guidance was adequate for cooldown operations but additional guidance was needed for heat-up operations. The necessary changes were incorporated prior to heat-up of Unit 1. Changes will also be made to the Unit 2 procedures prior to the shutdown of Unit 2.

EQUIPMENT DESCRIPTION

See FSAR Figure 5.2-10 (Attached).

CAUSE

On June 25, 1982, the NRC transmitted License Amendment Numbers 61 (Unit 1) and 66 (Unit 2) which provided primary containment integrated leak rate test requirements and schedules consistent in part to the requirements of Appendix J to 10 CFR Part 50. The accompanying Safety Evaluation Report (SER) states (in part):

> "Periodic hydrostatic testing of the RHR system is an adequate substitute for the pneumatic (Type C) testing required by Appendix J because the hydrostatic testing is utilized to ensure that the isolation valves are not relied upon to prevent the post-accident escape of containment air. Appendix J does not require further air (Type C) testing of these valves; therefore, an exemption from the requirements of Appendix J is acceptable."

On February 2, 1984, a review of all containment penetrations was conducted to determine which valves should be classified as Appendix J containment isolation valves. The review recommended that Valve CV-00369A be tested during RHR hydrostatic testing and not be Appendix J leak tested. This testing scheme was consistent with the above SER, and therefore deemed appropriate. However, a section of piping immediately upstream of Valve CV-00369B is designated non-QA and non-seismic Class 1 and does not qualify as a closed system. Therefore, Valve CV-00369A should have been Appendix J leak tested in accordance with Technical Specification 15.4.4.III.

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

CORRECTIVE ACTIONS

A. Immediate:

1. Plant records were reviewed to determine the history of leak rate tests performed on Valve 1CV-00369B

2. The lack of proper 10 CFR 50, Appendix J testing of Valve CV-00369A on both units was reviewed for operability concerns. No operability concerns were identified.

B. Short Term:

1. Valve 1CV-00369B was replaced with a new valve with a solid disk and was tested. A test connection was also installed to allow Valve 1CV-00369A to be 10 CFR 50, Appendix J tested.

2. A modification will be performed during U2R19 to add a test connection to allow 10 CFR 50, Appendix J testing of Valve 2CV-00369A.

3. Valve 2CV-00369B was inspected and it appears that the proper valve was installed. However, this will be verified during U2R19.

4. Operating procedures were reviewed to determine if changes were needed to restrict the opening of Valve CV-00369A above 200°F RCS temperature. It was determined that additional guidance was needed for heat-up operations. The necessary changes were incorporated prior to heat-up of Unit 1. Changes will also be made to the Unit 2 procedures prior to the shutdown of Unit 2.

C. Long Term:

1. A review of containment penetrations and associated containment isolation valves is being conducted to determine appropriate testing requirements. This review will be completed by July 15, 1993.

REPORTABILITY

This event is being reported under the requirements of 10 CFR 50.73(a)(2)(i)(B), "The licensee shall report...any operation or condition prohibited by the plant's Technical Specifications." The NRC Resident Inspector was also notified.

SAFETY ASSESSMENT

The safety of the plant, and the health and safety of the public and plant employees, were not jeopardized by this event. Although not Appendix J leak tested, Valve CV-00369A was hydrostatically tested annually as part of Inservice Test Procedures IT-530 (Unit 1) and IT-535 (Unit 2), "Leakage Reduction and Preventive Maintenance Program Test of the Residual Heat Removal System." This testing method was accepted by the NRC as documented in their Safety Evaluation Report dated June 25, 1982.

Valve CV-00369A also serves as part of the test pressure boundary during the Appendix J test of outside Containment Isolation Valve CV-00371. This branch of Penetration P-10 connects to the RHR system which is a closed system outside containment and serves as a containment boundary. Any leakage past Valve CV-00369A would subsequently be contained in the RHR system.

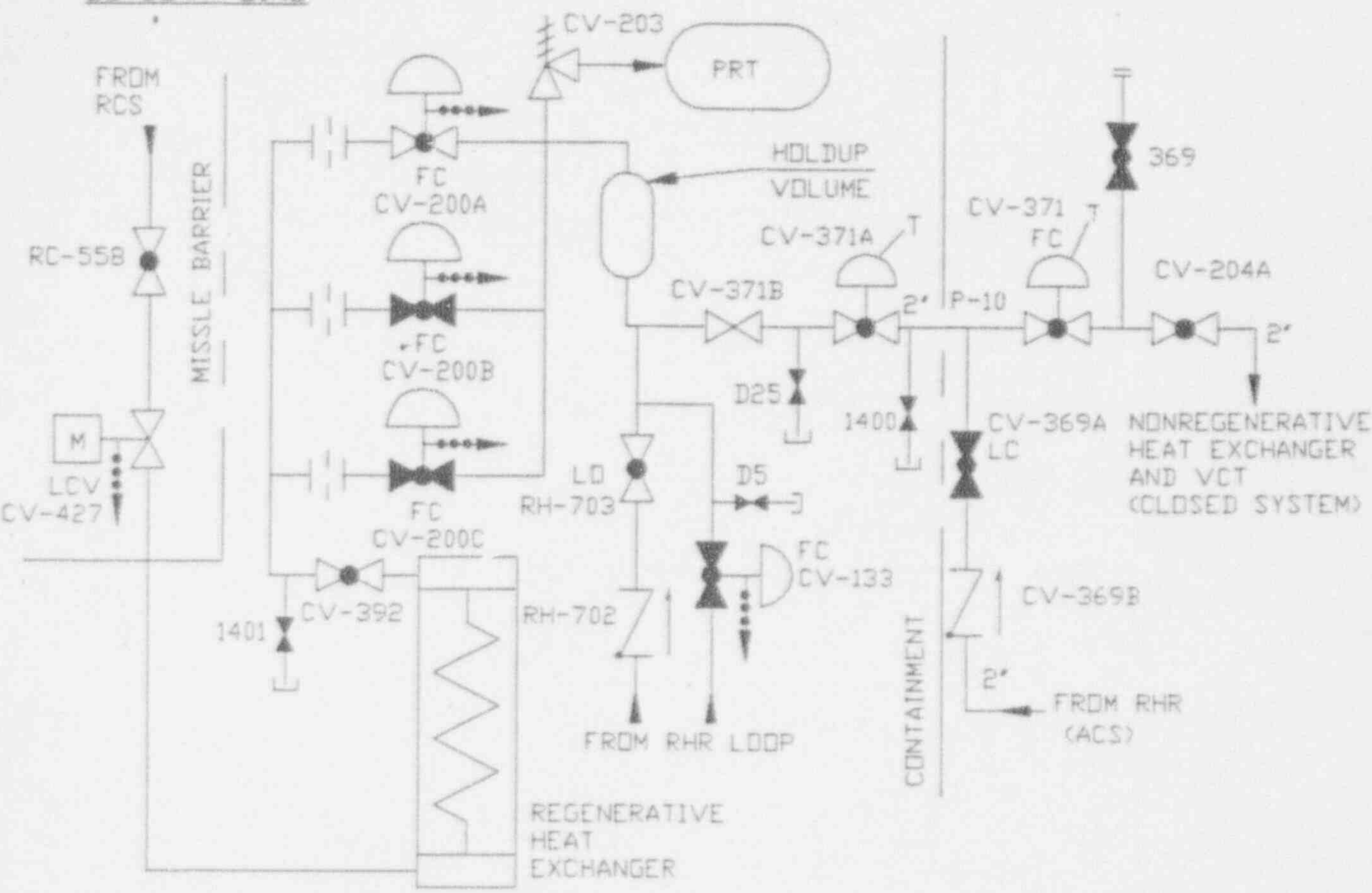
GENERIC IMPLICATIONS

No generic implications have been identified.

SIMILAR OCCURRENCES

No similar occurrences were identified.

LETDOWN LINE



PENETRATION	CONTAINMENT ISOLATION VALVES INSIDE	CONTAINMENT ISOLATION VALVES OUTSIDE	BRANCH/SYSTEM	LINE SIZE	FLUID	TEMP. HOT>200 COLD<200	CLASS
10	CV-371A	CV-371 CV-204A	LETDOWN LINE/RCS	2"	W	HOT	1
	CV-371A	CV-369A CV-369B	RHR PUMP DISCHARGE TO LETDOWN LINE/RHR	2"	W	HOT	1

FOR FURTHER INFORMATION REFER TO FSAR CHAPTER 9 & FIG. 9.2-1, 9.2-2

NOTE:

1) LETDOWN LINE BRANCH- THIS BRANCH MEETS CLASS 1 CONTAINMENT ISOLATION CRITERIA WITH AN AUTOMATIC TRIP VALVE (CV-371) AND A MANUAL VALVE (CV-204A) CONNECTED IN SERIES OUTSIDE CONTAINMENT TO A REMOTE OPERATED VALVE (CV-371A) INSIDE CONTAINMENT. THIS LINE IS CONNECTED TO THE REACTOR COOLANT SYSTEM. CVI-371A WAS ADDED AS A TMI COMMITMENT.

2) RHR PUMP DISCHARGE TO LETDOWN LINE- THIS BRANCH MEETS CLASS 1 CONTAINMENT ISOLATION CRITERIA WITH A LOCKED CLOSED MANUAL VALVE (CV-369A) WHICH QUALIFIES AS AN AUTOMATIC TRIP VALVE PER NOTE 3 IN FSAR SECTION 5.2.2 AND CHECK VALVE (CV-369B) WHICH FULFILLS THE REDUNDANT ISOLATION CRITERIA OF CLASS 1. BOTH ARE LOCATED OUTSIDE CONTAINMENT. REMOTE OPERATED VALVE (CV-371A) IS LOCATED INSIDE CONTAINMENT AND WAS ADDED AS A TMI COMMITMENT.

FIG. 5.2-10
June 1992