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NPL 2000-0346

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

10 CFR 50.73

Ladies/Gentlemen:

DOCKET NO. 50-266
LICENSEE EVENT REPORT 266/2000-007-00
CONTAINMENT UPPER HATCH INNER DOOR VENT VALVE FOUND UNLOCKED
POINT BEACH NUCLEAR PLANT UNIT 1

Enclosed is Licensee Event Report 2666/2000-007-00 for the Point Beach Nuclear Plant Unit 1. This report is provided in accordance with 10 CFR 50.73(a)(2)(i)(B) as, "any operation or condition prohibited by the plant's Technical Specifications." This report describes the discovery during post maintenance testing that the vent valve mechanism for the upper containment access airlock was not locked in accordance with Technical Specification 15.3.6.A.1.d(2)(b).

New corrective action commitments are identified in the report by italics.

Please contact us if you require additional information.

Sincerely,

A. J. Cayia
Manager,
Site Services and Assessment

CWK/tat

Enclosure

cc: NRC Resident Inspector
NRC Regional Administrator
NRC Project Manager
PSCW
INPO Support Services

IE22

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

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TITLE (4)

Containment Upper Hatch Inner Door Vent Valve Found Unlocked

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	07	2000	2000	- 007	- 00	08	03	2000		05000	
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
N			20.2201(b)			20.2203(a)(2)(v)			X	50.73(a)(2)(i)	50.73(a)(2)(viii)
POWER LEVEL (10)			20.2203(a)(1)			20.2203(a)(3)(i)				50.73(a)(2)(ii)	50.73(a)(2)(x)
100			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 or in NRC Form 366A
			20.2203(a)(2)(iv)			50.36(c)(2)				50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME
Charles Wm. Krause, Senior Regulatory Compliance Engineer

TELEPHONE NUMBER (Include Area Code)
(920) 755-6809

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

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 July 7, 2000, while entering the Point Beach Nuclear Plant (PBNP) Unit 1 upper containment air lock to conduct post maintenance testing of the outer door interlock mechanism, the plant staff discovered that the inner door vent mechanism had not been locked following an air lock entry earlier that day to perform maintenance on the interlock mechanism. Although not locked, the inner door vent valve was shut and containment integrity had been satisfied at all times. However, in accordance with the PBNP Technical Specifications and plant procedures, the vent valve mechanism is required to be locked, and by intent of the specification, to remain locked except when necessary for completion of maintenance activities, within 24 hours of the initial identification of the inoperable interlock condition. The interlock mechanism was originally declared inoperable on June 30, 2000. This event is reportable as a condition prohibited by TS. There was no safety significance to this condition since containment integrity was maintained in accordance with the Technical Specification requirements throughout the event.

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

Event Description:

On June 30, 2000, at approximately 1600 CDT, maintenance troubleshooting of the Unit 1 upper containment air lock determined that the outer door interlock mechanism was not operating in accordance with its design. At that time the outer door interlock mechanism was declared inoperable and one hour and 24 hour Limiting Conditions for Operations (LCO) action statements were entered in accordance with Technical Specifications (TS) 15.3.6.A.1.d(2)(a) and (b) respectively. These specifications direct that if the containment air lock door interlock mechanism is inoperable, then an operable door must be verified closed in the effected air lock within one hour, and the operable door locked closed within 24 hours. These action statements were logged as complete when the upper air lock inner door was locked in accordance with operating instruction OI-134, "Containment Air Lock Operation with Inoperable Components." It should be noted that, in accordance with a note in the OI-134 instructions, both the controls for the inner door vent valve and latch mechanism were locked. This interpretation is consistent with the clarification in the Basis for TS 15.3.6, which states that an 'air lock door' includes the door itself, equalizing valve, operating mechanism seal, and door seals,

On July 7 at approximately 1816 CDT, after entering the Unit 1 upper containment air lock to conduct post maintenance testing of the outer door interlocks, it was discovered that, although the inner door vent valve was shut, the operating mechanism for this vent valve was not locked as required by TS 15.3.6.A.1.d(2)(b) and OI-134. A condition report was initiated to document this event (CR 00-2097). This event was subsequently determined to be a condition prohibited by the Technical Specifications and therefore reportable as a Licensee Event Report in accordance with 10 CFR 50.73(a)(2)(i)(B).

Cause:

An investigation of this event established that the PBNP Unit 1 upper hatch was last opened at approximately 11:30 on July 7 by maintenance personnel to work on the repair of the outer door interlock mechanism. The work was completed and the hatch locked at 12:19 CDT. During this interval, the dedicated operator, whose responsibility was to perform the function of the interlock whenever the mechanism lock is removed, was assigned from the mechanical maintenance group. This individual was trained on use of the containment air lock door functions, and had previously executed the dedicated operator functions including locking and unlocking the inner door using the OI-134 procedure. During the pre-job brief the importance of exercising positive control of the hatch mechanism and interlock in order to assure maintaining containment integrity during the maintenance activities was thoroughly covered. The pre-job brief discussed the assumption that the maintenance being performed would not require unlocking of the inner containment door. Since the operations personnel conducting the pre-job briefing understood that the inner door would not be unlocked, specific discussion of the process for locking the inner door vent valve and operating levers was not conducted. In addition, the step in OI-134 concerning unlocking the inner door was not appropriately annotated as "not applicable." Upon starting the maintenance, the mechanic stated that he found both the inner and outer doors locked. Based on discussions from previous performance of air lock interlock maintenance, the mechanic unlocked both door mechanisms. When relocking the inner door at the conclusion of the maintenance activities, the procedure OI-134 notes which detail the process for

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completing this evolution were not thoroughly read or understood.. As a result, the door was locked but the inner door vent valve, although shut at all times, was not locked in that position at the time the air lock was closed.

Corrective Actions:

Upon discovery of this condition, the inner air lock door vent valve was locked shut. The control room was notified of the condition and a condition report initiated.

A root cause evaluation of the circumstances involving this event has been initiated. This evaluation shall include assessment of the containment entry/exit process as directed in OI-134 for overall clarity and consistency. Corrective actions identified during this RCE will be recorded and tracked within the Licensee's corrective action program.

Component and System Description:

Containment air locks form part of the containment pressure boundary and provide a means for personnel access during all operating conditions. The doors are interlocked to prevent simultaneous opening. During periods when the containment boundary is not required to be operable, the door interlock mechanism may be disabled, allowing both doors of an air lock to remain open for extended periods when frequent containment entry is necessary. Each air lock door has been designed and tested to certify its ability to withstand a pressure in excess of the maximum expected pressure following a DBA in containment. As such, closure of a single door supports containment integrity. Each of the doors contains double gasketed seals and local leak rate testing capability to ensure pressure integrity. To effect a leak tight seal, the air lock design uses pressure seated doors (i.e., an increase in containment internal pressure results in increased sealing force on each door).

Each containment structure at PBNP is equipped with two air locks. Each air lock is required to be operable. For the air lock to be considered operable, the air lock interlock mechanism must be operable, the air lock must be in compliance with the Type B airlock leakage test, and both air lock doors must be operable. For the purposes of this section, 'airlock door' includes the door itself, equalizing valve, operating mechanism seal, and door seals. The interlock mechanism allows only one air lock door of an air lock to be opened at one time. This provision ensures that a gross breach of containment does not exist when containment is required to be operable. Closure of a single door in each air lock is sufficient to provide a leak tight barrier following postulated events. Nevertheless, both doors are kept closed when the air lock is not being used for normal entry into and exit from containment. TS 15.3.6.A.1.d. allows entry and exit to perform repairs on the affected air lock component. If the outer door is inoperable, then it may be easily accessed to repair. If the inner door is the one that is inoperable, then a short time exists when the containment boundary is not intact (during access through the outer door). The ability to open the operable door, even if it means the containment boundary is temporarily not intact, is acceptable due to the low probability of an event that could pressurize the containment during the short time in which the operable door is expected to be open.

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Safety Assessment:

Since one door of the containment airlock was operable and shut at all times, containment leak tight integrity was never compromised. Therefore, the health and safety of the public and the plant staff was not impacted by this event. This event did not constitute a Safety System Functional Failure.

System and Component Identifiers:

The Energy Industry Identification System component function identifier for each component/system referred to in this report are as follows:

<u>Component/System</u>	<u>Identifier</u>
Containment Leakage Control System	BD
Reactor Containment Building	NH
Air Lock	AL
Valve, vent	VTV
Door	DR

Similar Occurrences:

A review of recent LERs over the past two years identified the following related events involving containment air lock operability:

<u>LER NUMBER</u>	<u>Title</u>
LER 266/1999-014-00	Containment Upper Hatch Outer Door Vent Valve Found Open