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On October 2, 1985, after a containment inspe- exiting the outer door of the upper personnel of the containment hatch opened. This result personnel hatch air lock being open at the sa- momentary loss of containment integrity. Whe was opened, during the entry into the hatch is investigation, the inner door opened again. short loss of containment integrity. In each was immediately closed and locked. Since the slight vacuum, no release of containment atmos environment. The inner and outer door of the have been chained and locked shut.	ection in 1 hatch, t ted in bot ame time. en the out for the su This resu h case, th e containm osphere wa e Unit 1 u	Unit he in h doo This er ha bsequ lted e out e out s mad pper	l, whil ner doo rs of t was a tch doo ent in anot er door as at a e to th hatch	e he r her	
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Unit 1 at Point Beach Nuclear Plant experienced a loss of containment integrity while at 100% power on October 2, 1985, at 1429 hours and 1520 hours. The first integrity loss occurred while an inspection crew was exiting the containment through the upper personnel air lock. After opening the inner door and entering the air lock, the crew closed the inner door with some difficulty. After equalizing the pressure inside the airlock with the outside environment, the crew opened the outer door and heard a rush of air moving into the containment. The outer door was immediately (within 10 tc 15 seconds) closed. The crew then found the inner door ajar approximately one foot. The inner door was again closed and the exit procedure was implemented a second time. During the second exit attempt the air lock and its associated doors appeared to work correctly. The associated alarms in the control room indicated that the two doors of the air lock had been open simultaneously no more than 15 seconds. The subsequent interview of the crew also indicated that the time estimate for both doors being open was also about 15 seconds.

At approximately 1515 hours, a Maintenance crew reentered the containment air lock to investigate the cause of the failure of the interlock between the inner and outer doors. Upon opening the outer door of the containment air lock, the inner door opened again about one foot. The outer door was again closed while the crew investigated the reason for the failure of the door interlock. In this case, the loss of containment integrity was 15 to 20 seconds. The inner door was again latched and the airlock exited without incident.

# Apparent Cause of the Occurrence

The investigation of the inner door found bent shafts supporting the interlock cams allowing the opening of one door without the other door in the closed position. The cams are designed to prevent the opening of one door when the other is open. The cams could, therefore, rotate past each other without the doors being in their proper position. These cams were probably bent during an earlier containment entry or exit. The doors and their latches have at times been difficult to close. During one of the closing operations, the door could have been forced such that a cam and/or its associated shaft were bent. The root cause of the failure of the mechanical interlock system appears to be the size of the mechanical parts of the interlock system compared to the massive nature of the airlock doors.

RC Form 366A

NRC Form 386A (9-83)

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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# Analysis of the Occurrence

Because of the loss of containment integrity, this event is considered reportable under 10 CFR 50.73(a)(2)(ii), "Any event or condition that resulted in the condition of the nuclear plant, including its principal safety barriers, being seriously degraded."

The interlock provided for the inner and outer doors of the personnel hatch airlock is mechanical. The cams in each door are designed to prevent operation of the latches on each door until the opposite door latches have been put in the position of a fully closed door. During this incident, the inner door may have been forced past the location on the cam which indicated a fully closed inner door. This gave the operator an indication that the inner door was fully closed when in actuality it was not.

This false indication on the inner door also allowed the outer door to be opened when the inner door was not closed.

The physical sizes of the cam and shaft parts in the interlock system are believed to be large enough and heavy duty enough to provide adequate interlock capability under normal conditions. It does, however, appear necessary to emphasize to personnel using the airlock, that the door and its associated lever systems should not be forced. The doors and their interlock mechanism have been inspected and repaired when appropriate during past refueling outages. These previous inspections have been confined to those areas in the door system which have, in the past, indicated functional problems.

There are minor safety consequences and implications involved in this occurrence. The containment integrity was lost for 10 to 20 seconds on two separate occasions during 100% power operation. On both occasions, the containment was at a lower pressure than the outside atmosphere and air flow was into the containment. Therefore, no release to the environment was made. A review was made of the consequences of the occurrence of an accident in containment concurrent with the loss of containment integrity. The evaluation showed that both doors open into containment such that if a pressure increase occurred inside containment, the doors would have been forced closed and sealed by the pressure against the door from the inside of the door. Therefore, very little or no radioactive materials could have been released during such a hypothesized event. NRC Form 386.4

#### LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION APPROVED OMB NO 3150-0104

EXPIRES 8/31/85

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#### Corrective Action:

The second containment integrity loss was a result of the immediate corrective action taken. The crew entering the containment hatch identified the problem with the interlock and proceeded to chain and lock both the inner and outer doors until final repairs could be made to the interlock system. The interlock shaft and cam system have been repaired and the system will be inspected during each refueling outage to ensure the proper operation of the system. This annual inspection will be added to the areas to be inspected during each outage. Appropriate revisions to procedures, to ensure inspection, will be accomplished by February 1, 1986.



VPNPD-85-500 NRC-85-118

October 30, 1985

Mr. J. G. Keppler, Regional Administrator Office of Inspection and Enforcement, Region III U. S. NUCLEAR REGULATORY COMMISSION 799 Roosevelt Road Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

DOCKET NO. 50-266 LICENSEE EVENT REPORT NO. 85-008-00 MOMENTARY LOSS OF CONTAINMENT INTEGRITY POINT BEACH NUCLEAR PLANT, UNIT 1

Enclosed is Licensee Event Report No. 85-008-00 for Point Beach Nuclear Plant, Unit 1. This report provides a description of an incident involving a momentary loss of containment integrity. This event is reportable in accordance with 10 CFR 50.73(a)(2)(ii), "Any event or condition that resulted in the condition of the nuclear plant, including its principal safety barriers, being seriously degraded."

Very truly yours,

C. W. Fay Vice President Nuclear Power

Enclosure

Copies to MRC Document Control Desk, Washington, D. C. (w/original) NRC Resident Inspector

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