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Robert J. Barrett
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July 29, 2002
IPN-02-062

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

SUBJECT: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
License No. DPR-64
Licensee Event Report # 2002-002-00
Inoperable Isolation Valve Seal Water System Due to a Mispositioned Valve Is Outside Technical Specifications and a Safety System Functional Failure

Dear Sir:

The attached Licensee Event Report (LER) 2002-002-00 is hereby submitted as required by 10 CFR 50.73. This event is of the type defined in 10 CFR 50.73 (a)(2)(v)(C) and 10 CFR 50.73 (a)(2)(i)(B) for a condition recorded in Entergy's corrective action process as Condition Report CR-IP3-2002-01978.

Entergy is making no new commitments in this LER.

Very truly yours,

Robert J. Barrett
Vice President Operations
Indian Point 3 Nuclear Power Plant

cc: See next page

IE22

cc: Mr. Hubert J. Miller
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NRC FORM 366 (1-2001)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 6-30-2001

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

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TITLE (4)

Inoperable Isolation Valve Seal Water System Due to a Mispositioned Valve Is Outside Technical Specifications and a Safety System Functional Failure

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
										05000
05	17	01	02	- 02 -	00	07	29	02	FACILITY NAME	DOCKET NUMBER 05000

		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)							
OPERATING MODE (9)	1	20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)	
		20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)		50.73(a)(2)(x)	
POWER LEVEL (10)	100	20.2203(a)(1)		50.36(c)(1)(i)(A)		50.73(a)(2)(iv)(A)		73.71(a)(4)	
		20.2203(a)(2)(i)		50.36(c)(1)(ii)(A)		50.73(a)(2)(v)(A)		73.71(a)(5)	
		20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)		OTHER	
		20.2203(a)(2)(iii)		50.46(a)(3)(ii)	X	50.73(a)(2)(v)(C)		Specify in Abstract below or in NRC Form 366A	
		20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)			
		20.2203(a)(2)(v)	X	50.73(a)(2)(i)(B)		50.73(a)(2)(vii)			
		20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)			
		20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(B)			

LICENSEE CONTACT FOR THIS LER (12)	
NAME	TELEPHONE NUMBER (Include Area Code)
Stephen Prussman	(914) 271-7363

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

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

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 15 single-spaced typewritten lines) (16)

On June 1, 2002, a Nuclear Plant Operator discovered that a manually operated vent valve (IV-1428) on the Isolation Valve Seal Water System (IVSWS) header was mispositioned in the open position making the IVSWS system inoperable. The open vent valve could have prevented pressurization of the IVSWS headers and the seal water in the IVSWS Tank would have drained in less than 2 hours. IVSWS is designed to provide a containment isolation valve water seal after a postulated loss of coolant accident to mitigate containment isolation valve leakage. The inoperability of the system since May 17, 2001 violated Technical Specifications and was a safety system functional failure. The cause of the mispositioning of the valve was human error in the failure to perform all system restoration steps during performance of a surveillance test. Upon discovery, the operator closed the vent valve and restored the IVSWS to operability. Corrective actions for past mispositioning events address the cause and extent of condition. A review of 3PT-R025A and other procedures written in similar format will be conducted to determine necessary changes. The inoperable IVSWS had no significant effect on public health and safety since the containment isolation valves remained operable and would have minimized plant leakage after a postulated loss of coolant accident.

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

DESCRIPTION OF EVENT

On June 1, 2002, at 100% steady state reactor power, a Nuclear Plant Operator (NPO) discovered that a manually operated header vent valve (IV-1428) on the Isolation Valve Seal Water System (IVSWS) {BD} was mispositioned in an open position. The discovery was made while performing a verification of Check off List COL-CB-4, during an extent of condition action from a prior mispositioning event. Upon discovery, the operator closed the vent valve and restored the IVSWS to operability. Operations recorded the mispositioning and initiated a Condition Report (CR-IP3-2002-1978) as required by the Indian Point 3 Corrective Action Program.

The IVSWS assures the leak tight integrity of some containment isolation valves (CIVs) by providing a water seal. The water seal is injected from a single seal water tank {TK} through five IVSWS headers into the process line between isolation valves, between the discs of double disc isolation valves, and into the packing lantern ring for several globe valves oriented so that packing could see containment atmosphere. The initial injection pressure is greater than peak accident pressure (initially at 47 psig). The IVSWS water tank is sized to provide the water seal for 24 hours, without operator action, after a postulated loss of coolant accident. The valves being sealed have leak test acceptance criteria that assure there is sufficient water in the tank. The open vent valve would have caused a loss of seal injection function since water in the IVSWS tank would have drained in less than 2 hours and pressure could not have been maintained in the header.

Operations conducted a review of Protective Tagging Orders (PTO), maintenance databases, COLs and test records to determine when IV-1428 could have been mispositioned. Operations concluded that the last time IV-1428 was verified to be in the correct position was May 13, 2001. The Operations review also determined the cause of the event. On May 13, 2001, IV-1428 was verified closed during the restoration from the fifth of six leak tests required by surveillance 3PT-R025A, "Leakage Test for IVSWS Station 1". On May 17, 2001, the sixth and final leak test for 3PT-R025A "Leakage Test For IVSWS Station 1" was performed. That leak test opened vent valve IV-1428. There were eight operators and two test group supervisors involved but there is no record that the final steps for system restoration were performed as required by 3PT-R025A. Interviews with several of the operators involved indicated the operators could not recall the details of the test they performed over a year ago. The procedure is written to perform six different tests in any sequence. Common set-up and restoration sections are provided for each test. Performance steps in these set-up and restoration sections allow for only one set of verification initials/signatures and operators are required to make copies of these steps for each test. Operations concluded that the process of adding duplicate pages to the procedure with hand written notes referencing the various sections created an error trap which could cause the operators to omit the final restoration steps.

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

CAUSE OF EVENT

The cause of the mispositioning of valve IV-1428 was human error, the failure to perform all system restoration steps during performance of surveillance test 3PT-R025A.

CORRECTIVE ACTIONS

The following corrective actions have been or will be performed under the Entergy's Corrective Action Program to address the causes of this event.

- The immediate corrective action was to place valve IV-1428 in its correct position (close) and restore the IVSWS to operability.

- Past mispositioning events at Indian Point 3 have resulted in corrective actions that will correct this cause. The corrective actions address human performance issues, individual errors and process/procedure issues.

    - o Mispositioning events in January and March 2001 resulted in Action Plan OPS-APL-0016. A new Operations Policy (subsequently added to Administrative Procedure 21 "Conduct of Operations") with respect to peer checks, pre-job briefs, procedural usage, place keeping and coaching cards was issued. The Operations Policy and the Action Plan OPS-APL-0016 corrective actions, with the efforts of the Watch Crews to support the initiatives, have significantly reduced the mispositioning rate.

    - o A root cause analysis was performed for a mispositioning event on May 14, 2002. Corrective actions are aimed at the human performance issue such as reinforcement of the requirements for procedures in-hand, reinforcing the expectation for proper verification, and a peer checking standard.

- Corrective action was initiated to review 3PT-R025A and five other procedures in the 25 series identified as being similarly structured for necessary changes to be made based on test group recommendations (CR-IP3-2002-01978).

- An extent of condition review of other valve lineups was not required because this event was determined as a result of an extent of condition review (safety valve positions are verified every 2 years).

ANALYSIS OF EVENT

The event is reportable under 10 CFR 50.73 (a) (2) (v) (C). The licensee shall report any operation or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material. This event meets the reporting criteria because the vent valve on the IVSWS was found mispositioned, which rendered the IVSWS inoperable from May 17, 2001 until the valve was closed on June 1, 2003. The event is also reportable under 10 CFR 50.73(a)(2)(i)(B), operation in a condition prohibited by Technical Specification (TS). TS 3.6.9 requires IVSWS to be operable.

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

A review of Licensee Event Reports (LERs) for the previous two years was performed to identify any LERs due to a safety system functional failure as a result of mispositioning. No such LERs were identified.

SAFETY SIGNIFICANCE

This event had no significant effect on the health and safety of the public.

No event occurred that would require the IVSWS to perform its function.

If a postulated loss of coolant accident occurred, the IVSWS would not have been available to mitigate plant releases by sealing potential leakage paths. This would not have caused the whole body and thyroid off site doses to exceed the guidelines specified in 10 CFR 100 based on Type A leakage testing which was conducted with the valves closed and the seal water drained. Continued integrity of the isolation valves is assured by leakage testing in accordance with the Containment Leakage Rate Testing Program and the continued operability of the containment isolation valves is demonstrated by testing in accordance with the Inservice Testing Program. Further, the loss of IVSWS function does not have any impact on the large early release frequency or the core damage frequency. The loss of the IVSWS system as a release path was not required to be modeled in the Level II IPE.

The loss of IVSWS is categorized as a safety system functional failure.