

Indian Point 3
Nuclear Power Plant
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Robert J. Barrett
Site Executive Officer

June 16, 1999
IPN-99-065

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

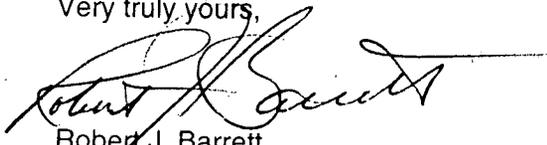
SUBJECT: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
License No. DPR-64
Licensee Event Report # 1999-006-00
**Plant Outside Design Basis due to Routing of Component
Cooling Water Piping Inside Missile Shield Wall in
Containment During Original Plant Design**

Dear Sir:

The attached Licensee Event Report (LER) 1999-006-00 is hereby submitted as required by 10 CFR 50.73. This event is of the type defined in 10 CFR 50.73 (a)(2)(ii)(B).

The Authority is making no new commitments in this LER.

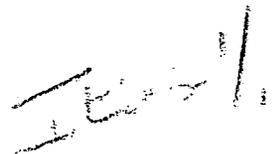
Very truly yours,



Robert J. Barrett
Site Executive Officer
Indian Point 3 Nuclear Power Plant

cc: See next page

9906290114 990616
PDR ADOCK 05000286
S PDR



cc: Mr. Hubert J. Miller
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U. S. Nuclear Regulatory Commission
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U.S. Nuclear Regulatory Commission
Resident Inspectors' Office
Indian Point 3 Nuclear Power Plant

NRC FORM 366 (6-1998)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001 Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), 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. If an 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)		

FACILITY NAME (1) Indian Point 3	DOCKET NUMBER (2) 05000286	PAGE (3) 1 OF 4
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TITLE (4)
 Plant Outside Design Basis due to Routing of Component Cooling Water Piping Inside Missile Shield Wall in Containment During Original Plant Design

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
12	12	1975	1999	-- 006	-- 00	06	16	1999	N/A	05000
									FACILITY NAME	DOCKET NUMBER
									N/A	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	20.2201(b)	20.2203(a)(2)(v)	50.73(a)(2)(i)	50.73(a)(2)(viii)					
		20.2203(a)(1)	20.2203(a)(3)(i)	X 50.73(a)(2)(ii)	50.73(a)(2)(x)					
		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 Stephen Prussman, Licensing Engineer	TELEPHONE NUMBER (Include Area Code) (914) 736-8856

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

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

On May 20, 1999, with reactor power at approximately 100 percent, NYPA made a one hour report to the NRC regarding a condition outside the plant design basis. Portions of the Component Cooling Water (CCW) System piping inside containment were not run outside the crane wall for missile protection, contrary to the design basis stated in the Final Safety Analysis Report (FSAR). This condition has existed since the time the original license was issued on December 12, 1975. The condition was apparently evaluated as acceptable on May 26, 1989 (this is being verified) by a nuclear safety evaluation which concluded that CCW was a closed loop inside containment based on the reactor coolant system leak before break analysis and high energy line evaluations. The plant continued operation based on a reasonable expectation of operability and a subsequent reasonable assurance of safety. Corrective action will involve the preparation of a safety evaluation to verify that the CCW is a closed loop inside containment. Based on the 1989 safety evaluation, there is no safety significance since the piping was found to be a closed loop inside containment and therefore able to perform the design function. The corrective action is expected to verify this.

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

Note: The Energy Industry identification system Codes are identified within the brackets {}

DESCRIPTION OF EVENT

On May 20, 1999, at approximately 1423 hours, with reactor power at approximately 100 percent, NYPA made a one hour report to the NRC regarding a condition outside the plant design basis. Portions of the Component Cooling Water (CCW) System {CC} piping inside containment {NH} were not run outside the crane wall for missile protection, contrary to the design basis stated in the Final Safety Analysis Report (FSAR). The plant continued operation based on a reasonable expectation of operability (REO) for the CCW piping. A deviation event report (DER 99-1006) recorded the condition and corrective actions were initiated.

DER 99-0840, written on April 28, 1999, identified the CCW piping inside the shield wall as contrary to the FSAR. This was a finding of the 10 CFR 50.54(f) FSAR review effort. Immediate corrective action included a determination that there was a reasonable expectation of operability (REO). Several factors were considered in that determination. The most significant of those was a nuclear safety evaluation (NSE) in 1989 to address the change in the CCW from a closed system outside containment to an open system. The NSE identified two reasons for considering the CCW a closed system inside containment. The first reason identified in the NSE was a March 10, 1986 NRC safety evaluation of the leak before break evaluation for the Reactor Coolant System (RCS) {AB} which eliminated the dynamic effects of a primary coolant loop pipe break as a design basis. The second reason identified in the NSE was that the evaluation of other high energy lines in the vicinity of the CCW piping determined that failures of that piping would not adversely affect the CCW piping. A Reasonable Assurance of Safety (RAS) has been written to close the REO. A NSE will be written to fully document the CCW design basis and to revise the FSAR accordingly.

Following the issuance of DER 99-0840, an evaluation of original plant documentation was undertaken to locate documentation that would identify the basis for the CCW pipe inside the shield wall with respect to the dynamic effects of pipe break. When that evaluation concluded that no documentation could be located, DER 99-1006 was written and the one hour report was made. The review of documentation identified 1968 Preliminary Safety Evaluation Report (PSAR)

(6-1998)

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

supplements that stated the CCW system was a dual header design, in consideration of accommodating a single active or passive failure. The PSAR indicated that CCW is provided with two main headers with the cooling loads divided between the two headers in such a manner as to ensure that each header is capable of supplying the necessary service to enable continued containment sump and core recirculation following a Loss of Cooling Accident (LOCA). Isolation valves are furnished to allow each loop to be isolated and operated as an independent component cooling loop. The FSAR still says this.

CAUSE OF EVENT

The routing of CCW piping inside the shield wall was original plant design. The reason(s) for either not evaluating or not documenting the acceptability of this design, and revising the FSAR to reflect the acceptability of the pipe routing, have not been identified, due to the amount of time that has passed.

CORRECTIVE ACTIONS

The following corrective actions have been or will be performed under the Authority's corrective action program to address the causes of this event:

- A REO and, subsequently, a RAS, were written to document the basis for continued plant operation. These reference the March 10, 1986 NRC safety evaluation that says "the staff concludes that the probability or likelihood of large pipe breaks occurring in the primary coolant system loops of Indian Point Unit 3 is sufficiently low such that dynamic effects associated with postulated pipe breaks in the primary coolant system of this facility need not be a design basis."
- A NSE will be written as part of our corrective action program to revise the design basis for CCW piping routed inside the shield wall. The NSE will identify necessary FSAR revisions to clarify the licensing basis.
- The extent of condition is being addressed by the FSAR 50.54(f) review program with risk significant systems scheduled for completion by November 1999. No other piping requiring missile protection by the crane wall has been identified as inside the crane wall.

LICENSEE EVENT REPORT (LER)
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ANALYSIS OF EVENT

The event is reportable under 10 CFR 50.73 (a) (2) (ii) (B). The licensee shall report any operation or condition that resulted in the nuclear power plant being in a condition that was outside the design basis of the plant. The routing of the CCW did not meet the system design criteria for protection against missiles when originally licensed on December 12, 1975. The system design basis was apparently restored May 26, 1989 when an NSE concluded that the CCW system was a closed system inside containment. Our corrective actions will verify this.

Licensee Event Reports (LER) for the past two years were reviewed to identify cases where the plant was outside design basis due to original plant design. LER 97-006 reported that operation of the refueling water storage tank purification loop was outside the design basis since original provisions to isolate the non-safety purification loop did not meet design criteria.

SAFETY SIGNIFICANCE

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

There were no actual safety consequences for the event because there was no event requiring CCW that could also have caused consequential damage to the CCW piping due to dynamic effects.

There were no potential safety consequences due to design bases events. The NRC has approved, by SER dated March 10, 1986, an evaluation that shows a LOCA in the large piping of the RCS (hot leg, cold leg and crossover leg) will leak before breaking, and approved elimination of the dynamic effects from consideration as part of the plant design basis. A 1989 NSE has indicated that pipe break analyses of other high energy lines inside containment shield wall will not affect CCW piping. This indicates the system can perform its function. This analysis, including supporting documentation of the 1989 NSE, is being verified as part of our corrective action.