

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

September 17, 1998  
IPN-98-099

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

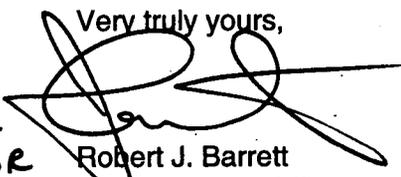
SUBJECT: Indian Point 3 Nuclear Power Plant  
Docket No. 50-286  
License No. DPR-64  
Licensee Event Report # 1998-005-00  
**Operation in A Condition Prohibited by Technical  
Specifications Due to An Inoperable City Water Check  
Valve For Which No Allowed Outage Time Is Specified**

Dear Sir:

The attached Licensee Event Report (LER) 1998-005-00 is hereby submitted as required by 10 CFR 50.73. This event is of the type defined in 10 CFR 50.73 (a)(2)(i)(B).

The Authority is making no new commitments in this LER.

Very truly yours,

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

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cc: See next page

9809290021 980917  
PDR ADOCK 05000286  
S PDR

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

**LICENSEE EVENT REPORT (LER)**

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

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.

FACILITY NAME (1)

Indian Point 3

DOCKET NUMBER (2)

05000286

PAGE (3)

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TITLE (4)

Operation in A Condition Prohibited by Technical Specifications Due to An Inoperable City Water Check Valve For Which No Allowed Outage Time Is Specified

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
08	16	1998	1998	-- 5	-- 00	09	17	1998	N/A	05000
									N/A	05000

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
N	59	20.2201(b)	20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)	50.73(a)(2)(viii)			
		20.2203(a)(1)	20.2203(a)(3)(i)		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	TELEPHONE NUMBER (Include Area Code)
Stephen Prussman, Senior Licensing Engineer	(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)

YES (If yes, complete EXPECTED SUBMISSION DATE).	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input checked="" type="checkbox"/>			10	11	1998

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

On August 16, 1998, at approximately 1050 hours, with reactor power at approximately 59 percent, insufficient flow was observed in the city water lines to the charging pumps while performing a scheduled Technical Specification surveillance test. Operations initiated an investigation and, at 1115 hours, began making preparations to shutdown the plant since Technical Specification 3.2.B.7 requires city water piping and valves to be operable to the extent required to provide emergency cooling water to the charging pumps and has no allowed outage time. The flow blockage was determined to be caused by rust and sediment around check valve MW-683. Emergency repairs were completed, the city water supply was satisfactorily tested and the LCO action was exited at 1210 hours. The city water system to the charging pumps was considered inoperable for approximately 55 minutes. Corrective actions included flushing the valve, and increased preventive maintenance for the city water valves. This LER is being submitted more than 30 days after the event because the event was not recognized as reportable at the time it occurred. The event was recognized as reportable on September 16, 1998. It was recognized while preparing an LER to report a subsequent failure of valve MW-683. The subsequent failure occurred during preventive maintenance that had been initiated as part of the corrective action for the August 16 event. The event had no effect on public health and safety.

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

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		1998 - 5 -- 00			

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 August 16, 1998, at approximately 1050 hours, with reactor power at approximately 59 percent, insufficient flow was observed in the city water lines to the charging pumps {P} while performing scheduled surveillance test 3PT-R39 to meet Technical Specification 4.1. Operations initiated an investigation and, at 1115 hours, began making preparations to shutdown the plant since Technical Specification 3.2.B.7 requires city water piping {PSP} and valves {V} to be operable to the extent required to provide emergency cooling water to the charging pumps and has no allowed outage time. For Limiting Conditions for Operation (LCO) where no exception time is specified, the plant is considered to be in an immediate shutdown condition under Technical Specification 3.0 which specifies the exception time as zero. The flow blockage was determined to be caused by rust and sediment around check valve {V} MW-683. Emergency repairs were completed, the city water supply was satisfactorily tested and the LCO action was exited at 1210 hours. The city water system to the charging pumps was considered inoperable for approximately 55 minutes.

The city water surveillance test 3PT-R39 was performed on November 6, 1996 to meet Technical Specification 4.1, Table 4.1-3 (24 month surveillance test to check that the valves for the city water connections to the charging pumps and boric acid piping are operable). Operations Department personnel initially observed lower than normal flow through valve MW-684 until flushed. A Deviation Event Report (DER 96-2446) was initiated to document the condition and determine further corrective action. A Preventive Maintenance (PM) corrective action was initiated to annually flush the valves with city water and test flow as a result of this DER. This was performed satisfactorily on November 11, 1997. Surveillance Test 3PT-R39 was performed, as scheduled, on August 16, 1998, and flow was not obtained. The test was recorded as failed. Investigation of this failure discovered that check valves MW-682 and MW-683 had rust and sediment around the valve seat preventing check valve opening and prohibiting flow. The rust and sediment was cleaned off and the valves re-tested successfully. An additional corrective action for the August 16, 1998 event was to change the annual PM to a monthly PM. The initial monthly PM was initiated by rescheduling the annual PM from November 11, 1998 to September 11, 1998. On September 11, 1998, no flow was found when performing the PM. LCO action 3.0 was entered, emergency repairs were completed and LCO action 3.0 was exited in less than one hour. DER 98-1621 was written and the event was identified as reportable. The investigation of that event found no sediment deposition but there was a ring of rust around the valve seat.

This LER is being submitted more than 30 days after the event because the event was not recognized as reportable at the time it occurred. On September 16, DER 98-1657 was written to record that the need for an LER had not been identified following the August 16 event. This was identified while working on the LER for the September 11, 1998 event which was due to no observed flow during the monthly PM. The September 11, 1998 event will be reported in a supplement to this LER.

**LICENSEE EVENT REPORT (LER)**  
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

**CAUSE OF EVENT**

The cause of valve MW-683 failing to allow city water flow was initially determined to be sedimentation. Further investigation indicates that the potential cause is rust binding of the valves caused by the valve materials (carbon steel) and the operation of the line (the line is flushed, drained and opened to air).

The August 16 event was reportable because Technical Specification 3.2.B.7 has no allowed outage time and the plant was therefore in a condition prohibited by Technical Specifications. The cause for not identifying the August 16 event as reportable is being evaluated under DER 98-1657 as part of our corrective action program.

**CORRECTIVE ACTIONS**

Immediate corrective action was taken on August 16 to clean city water valves following the loss of flow and to verify that city water flow was restored. Additional corrective actions taken under our corrective action program to address the cause of the event include:

- The frequency for flushing and testing the valves was increased to monthly until otherwise indicated.
- Modifications to address the conditions causing check valve sticking are being assessed, including the acceptability of removing the check valves, changing the valve material, changing preventative maintenance and layup options.
- A proposed change to Technical Specification Section 3.2 has been prepared which will result in correcting the lack of an allowed outage time for the city water supply.
- The corrective actions for not initially identifying the August 16 event as reportable will be determined during the investigation of DER 98-1657.

**ANALYSIS OF EVENT**

The event is reportable under 10 CFR 50.73 (a) (2) (i) (B). The licensee shall report any operation or condition prohibited by the plant's Technical Specifications.

This event meets the reporting criteria because Technical Specification 3.2 does not contain an allowed outage time (AOT) or action statement when the requirements of Technical Specification 3.2.B.7 are not met. When valve MW-683 failed it was declared inoperable and the plant was in a condition prohibited by the technical specifications because the requirements of Technical Specification 3.2.B.7 were not met and no action statement is provided.

**LICENSEE EVENT REPORT (LER)**  
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

A review of the past two years of Licensee Event Reports (LER) for events that involved inoperable equipment that had no Technical Specification AOT identified LER 97-021 and LER 97-032.

**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 city water to the charging pumps.

There were no potential safety consequences due to design bases events from the unavailability of the city water to the charging pumps. The bases of Technical Specification 3.2 state that city water is required for emergency cooling of the charging pumps and for flushing the boration pathway following a complete loss of AC electrical power and/or a complete loss of service water from turbine missiles. The city water is not essential for either of these events for the following reasons:

- The plant response to loss of all AC power is currently based on the use of the Appendix R diesel as an alternate AC power source that is assumed to be available after one hour. When the Appendix R diesel is started, power is resupplied through the safety related 480 volt buses to the component cooling water pumps as well as charging pumps. With component cooling available, city water is backup for cooling the charging pumps.
- The charging pumps are no longer required for a turbine missile event. In 1991, FSAR Appendix 14A was revised to indicate that damage to the service water system from a turbine missile is no longer postulated to occur.