

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. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), 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.

FACILITY NAME (1)	Indian Point 3	DOCKET NUMBER (2)	05000286	PAGE (3)	1 OF 4
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TITLE (4)	The Safety Injection System Was Aligned for Testing Contrary to The Technical Specifications Due to Personnel Errors				
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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
10	23	97	97	-028-	00	11	21	97	FACILITY NAME	DOCKET NUMBER 05000
									FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	NA	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
POWER LEVEL (10)	000	20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)		
		20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)		
		20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)			OTHER	
		20.405(a)(1)(iii)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		(Specify in		
		20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		Abstract below		
		20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)		and in Text, NRC Form 366A)		

LICENSEE CONTACT FOR THIS LER (12)	
NAME Al Froebrich, Operations Engineer	TELEPHONE NUMBER (Include Area Code) (914) 736-8206

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/>	NO					

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

On October 23, 1997, the plant was operating at 100% power. On that day, a system engineer reviewing operator logs discovered that on September 4, 1997, while the reactor was in hot shutdown condition, Operations had aligned a safety injection system valve contrary to the technical specifications for fifty minutes to perform post maintenance testing. A historical review for similar conditions identified that the same type of test was performed in 1995. During the testing performed on September 4, 1997, Operations entered a second safety injection system limiting condition for operation action statement; entering two action statements is contrary to the technical specifications. The event was caused by personnel error and inattention to detail in that licensed operators misapplied the technical specifications when aligning the system. Contributing to the cause was an inappropriate test method. Corrective actions include providing the lessons learned from this event to licensed operators. Operations procedures and initial licensed operator training will be enhanced. Engineering will determine an appropriate test method for these types of valves. This event did not affect the health and safety of the public due to the shutdown condition of the reactor and the short duration of the activities.

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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 October 23, 1997, the plant was operating at 100% power. System engineers periodically review plant operating logs to determine system availability, as part of the maintenance rule implementation. On October 23, during this type of review, a system engineer discovered that on September 4, 1997, Operations had aligned a safety injection (SI) system {BQ} valve (SI-MOV-856B) contrary to the technical specifications (TS) for a duration of fifty minutes, to accommodate post maintenance testing. The testing on September 4, 1997 was performed while the reactor was shutdown, and the reactor coolant system (RCS) {AB} was at about 547 degrees F and about 2250 psig. The TS requires that this high head hot leg SI system valve be closed and deenergized whenever the RCS is above 350 degrees F. The U.S. Nuclear Regulatory Commission's safety evaluation report (supplement no. 3), dated April 5, 1976, requires that, during power operation, this type of valve be deenergized and closed, to preclude steam binding during the injection phase of a postulated loss of coolant accident (LOCA). Operations energized and opened this valve to perform a leak check as part of the test for the repacking of the valve. The TS permits any valve required for the functioning of the SI system to be inoperable for up to twenty-four hours, as long as its redundant valve is operable. Licensed operators performed the system alignment because they believed that opening the valve rendered only the valve inoperable, and that the other header could perform the safety function. They did not recognize that these valves needed to remain closed and deenergized to prevent steam binding during a postulated LOCA with a safety injection.

During the testing on September 4, 1997, Operations simultaneously entered a second SI system limiting condition for operation (LCO) action statement while testing the valve (SI-MOV-856B). This action is contrary to the technical specifications. A second LCO action statement was entered to fill an accumulator in the SI system using system operating procedure SOP-SI-1. Operators demonstrated a lack of attention to detail because the TS allows only one LCO action statement for the SI system to be entered at any one time.

An extent of condition review was performed on the work history from the last two major outages to identify conditions similar to the valve misalignment. Included in this review were the TS valves that cannot be energized or repositioned with the RCS above 350 degrees F. This review identified that on May 20, 1995, during a plant startup both high head hot leg SI system valves were opened for about twenty-nine minutes, for the same type of test, while the plant was at 547 degrees, with the reactor shutdown.

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CAUSE OF EVENT

The event was caused by personnel error in that the licensed operators misapplied the technical specifications when aligning the system for testing, due to a lack of knowledge of the basis for the SI system valve position requirements. While performing the test, they demonstrated a lack of attention to detail by entering a second LCO action statement on the SI system to fill an accumulator.

The test for valve SI-MOV-856B required running the SI pump to pressurize the valve packing, which is isolated from system pressure when the valve is shut. The SI pumps generate about 1500 psig of discharge pressure. The RCS overpressure protection system (OPS) must be operable below 332 degrees F. At that temperature the upper pressure at which OPS actuates is about 1100 psig. Operating an SI pump below 350 degrees F to pressure test the valve packing would add inventory to the RCS and could actuate the OPS system. Therefore, a contributing cause to the inappropriate alignment of the system is that the test method prescribed is inappropriate for this type of valve.

CORRECTIVE ACTIONS

Operations has counseled the licensed operators involved in entering two SI system LCO action statements concurrently.

Operations has issued a shift order to inform licensed operators of the inappropriate application of the technical specification during this event, and the basis for the SI system valve position requirement.

Operations will revise system operating procedures (SOP-SI-1 and SOP-RHR-1) to provide a precaution and limitation for the system valves that must not be energized or repositioned when the reactor coolant system is above 350 degrees F. The revision will provide a precaution and limitation for not entering two safety injection LCO action statements simultaneously. These revisions will be complete by December 5, 1997.

Performance engineering will provide an appropriate test method for future tests of the SI system valves that must not be energized or repositioned when the RCS is above 350 degrees F. This type of valve is tested during startup from a major outage, and the next major outage is scheduled for 1999. An appropriate test method for this type of valve will be specified by March 31, 1998.

Training will provide this event as a lesson learned during a licensed operator requalification training course, by April 30, 1998.

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CORRECTIVE ACTIONS, Continued

Training will add the basis for the technical specification regarding safety injection valve positions to the initial licensed operator (ILO) training program. They will also add to the ILO training program the prohibition on energizing these valves or changing their position with the reactor coolant system above 350 degrees F. These actions will be completed by April 30, 1998.

ANALYSIS OF EVENT

This event is reportable under 10CFR50.73(a)(2)(i)(B) as a condition prohibited by technical specifications. The condition prohibited by technical specifications existed for a combined duration of seventy-nine minutes during the last two major outages.

Licensee Event Reports from the last two years were reviewed to identify similar events. This review identified a similar event, where an operator misapplied technical specifications, as described in LER 97-04, "The Fuel Storage Building Emergency Ventilation System Was Inoperable During Movement of the Cask Crane Over the Spent Fuel Pit Due To Failure To Perform All Required Testing." Also, for the extent of the condition where two LCO action statements were entered concurrently, it is likely that system engineers would have identified a similar condition while performing their review of operator logs back to January of 1996, as has been directed by maintenance rule procedures.

SAFETY SIGNIFICANCE

This event did not affect the health and safety of the public due to the shutdown condition of the reactor and the short duration of the event. The system alignment for hot leg injection was performed while the reactor was shutdown, whereas the Safety Evaluation Report credits maintaining these valves closed at power operation. During a postulated loss of coolant accident the hot leg injection valves are opened after fourteen hours. Since this event occurred with the reactor shutdown well beyond fourteen hours it is expected that the safety injection system would have been able to perform its function if a postulated loss of coolant accident had occurred. The duration of this event was within the two hour allowed outage time specified in the standard technical specifications for isolating all high head safety injection flow paths during pressure isolation valve testing while in the same plant condition. It is unlikely that a postulated loss of coolant accident would occur during the short time that the system was misaligned. The test specified that it be performed prior to the reactor being brought critical. Therefore, it is not reasonable to consider the potential consequences of this event with the reactor critical during a postulated loss of cooling accident.