

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 (MNNB 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 6
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TITLE (4) Plant Outside Design Basis Due to Failure to Analyze Loss of Ventilation Systems In Appendix R Analysis

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
03	20	95	95	-- 006 --	00	04	19	95	FACILITY NAME	DOCKET NUMBER 05000
									FACILITY NAME	DOCKET NUMBER 05000

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

NAME Frank Bloise, Fire Protection Engineering Manager	TELEPHONE NUMBER (Include Area Code) (914) 681-6271
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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
<input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE).	<input type="checkbox"/> NO		07		31	95	

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

On March 20, 1995, with the plant in cold shutdown, a four-hour report provided a preliminary and conservative conclusion that approximately 60 issues identified during a reassessment of Appendix R compliance placed the plant in an unanalyzed condition that may, in aggregate, have significantly compromised plant safety. Subsequent assessment has determined that the aggregate effect of the issues (i.e., that effect beyond the safety significance of the individual issues) is not reportable. However, a reportable event was identified. The effects of a loss of ventilation due to spurious ventilation system operation or spurious CO₂ system operation was not adequately evaluated. The past potential effect on public health and safety of this event is being evaluated and will be reported in a supplement. The cause is also under evaluation and will be reported in a supplement. Corrective actions include: reevaluated / updated Appendix R Analysis, revised procedure for modification review to address fire protection, developed Appendix R Operational Specifications, modified the switchgear room CO₂ system circuitry, revised safe shutdown procedures, installed temperature alarms, revising operation procedures and preparing the fire protection design basis document.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Indian Point 3	05000286	95	-- 006 --	00	2 OF 6

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

DESCRIPTION OF EVENT

On March 20, 1995, at approximately 1430 hours, with the plant in cold shutdown (reactor power level at 0%, reactor coolant temperature at 125 degrees Fahrenheit, reactor coolant pressure at atmospheric and the pressurizer level at 22%), Fire Protection Engineering initiated DER 95-0568 to report a conservative and preliminary conclusion that approximately 60 issues (this turned out to be 58), identified during the reassessment of Appendix R compliance, placed the plant in an unanalyzed condition that may, in aggregate, have significantly compromised plant safety. A four hour report was made at 1725 hours.

NYPA has recently completed a reassessment of compliance with 10 CFR 50, Appendix R. In 1994, NYPA reported (IPN-94-115 dated September 9, 1994) that certain issues had been identified and there were internal differences regarding those issues. The resolution of the issues, identified as a result of the NYPA effort to reassess compliance with Appendix R and prepare a fire protection Design Basis Document (DBD), was complicated by the internal differences of opinion. Independent consultants were tasked with oversight of NYPA's efforts in reviewing the issues and concurring on resolutions consistent with industry practice. The four hour report was made following a meeting to review the reportability of the issues. At that meeting, NYPA concluded that a final decision on reportability would require further review and documentation even though no specific basis for reporting individual items was identified. However, because a conclusion could not be reached concerning the reportability of the aggregate effect of the issues, NYPA made a decision to conservatively make a four hour report based on the preliminary conclusion that, in aggregate, the issues may have significantly compromised plant safety. NYPA recently reported (IPN-95-039 dated March 28, 1995) that evaluations of 55 of the 58 issues were complete and startup corrective actions were identified and completed, where required.

A subsequent assessment of the issues by an interdepartmental working group has determined that the aggregate effect of the issues (i.e., that effect beyond the safety significance of the individual issues) did not significantly compromise plant safety. However, an event was identified as reportable (note - several questions are still being addressed on issues identified as not reportable). The 1984 Appendix R Analysis did not adequately consider the effects of a loss of ventilation due to spurious ventilation system operation or spurious CO₂ system (LW) operation for the Cable Spreading Room (CSR), the 480V Switchgear (SWGR) Room (SR), and the Emergency Diesel Generator (DG) (EDG) cells.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Indian Point 3	05000286	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 6
		95	-- 006 --	00	

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

A fire in either fire area TBL-5 or YARD-7 could have caused a loss of ventilation in the SR and CSR. A fire in fire area TBL-5 could also have caused a loss of ventilation in the three EDG cells. If a CO₂ discharge occurred, the Control Room (NA) (CR) would have received an alarm and the Fire Brigade would have responded. If a CO₂ discharge did not occur, Operations would have been responsible for addressing the loss of ventilation. However, there is no direct indication of ventilation system operation in the CR. The Fire Brigade and Operations had no procedural guidance or training to allow them to recognize the need to establish portable ventilation or reestablish normal ventilation or to identify the time frame for performing those corrective actions. The ability of the plant to respond to a spurious loss of ventilation could not be considered acceptable due to these factors.

The failure of the 1984 Appendix R Analysis to adequately evaluate the effects of a loss of ventilation due to spurious ventilation system operation or spurious CO₂ system operation in the SR, CSR and EDG cells resulted in non compliance with the requirements of 10 CFR 50, Appendix R, Section III.G.2. Currently, compliance is based on the following:

- The SR ventilation can no longer be isolated by a spurious signal in the TBL-5 or YARD-7 fire areas.
- The spurious loss of ventilation to multiple EDG cells is not required when operator action is taken to prevent further spurious actuation (application of Generic Letter 86-10 guidance) and all three diesels are not required for shutdown. If there is indication of CO₂ initiation or a fire in the CSR, SR or any EDG cell, the pre-fire plans require the Fire Brigade restore the associated ventilation, if lost, and to isolate power to the associated CO₂ control panel. Also, alarm response procedure 15 requires operations to restore ventilation if there is a high temperature alarm and no fire.
- The required action to restore ventilation to the CSR is simple (open one damper and a door) and heat loads are not as significant as those in the EDG cells. If there is indication of CO₂ initiation or a fire in the CSR, SR or any EDG cell, the pre-fire plans require the Fire Brigade restore the associated ventilation, if lost, and to isolate power to the associated CO₂ control panel. Also, alarm response procedure 13 requires operations to restore ventilation if there is a high temperature alarm and no fire.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Indian Point 3	05000286	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 6
		95	-- 006 --	00	

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

Procedure ONOP-FP-1 is being revised to provide operator guidance for preventing spurious isolation and for restoring ventilation if it occurs.

CAUSE OF EVENT

The cause of the events has not yet been determined. It is under evaluation and will be reported in a supplement.

CORRECTIVE ACTIONS

The following actions have been or are being performed to provide corrective action and prevent recurrence of these types of deficiencies:

- The pre-fire plans have been revised. If there is indication of CO₂ initiation or a fire in the CSR, SR or any EDG cell, the pre-fire plans require the Fire Brigade to restore the associated ventilation, if lost, and to isolate power to the associated CO₂ control panel.
- Corrective action for the event identified in LER 95-003-00 was a modification to the circuitry for initiating CO₂ in the switchgear room so that a fire in fire area TBL-5 or YARD-7 could not cause loss of ventilation.
- Additional guidance will be prepared for operator action. Procedure ONOP-FP-1 will be revised to indicate how to prevent a spurious loss of ventilation and provide a methodology for restoration of ventilation following spurious isolation. This will be completed by May 19, 1995.
- Alarms in the Control Room indicating high ambient temperatures (about 100°F) in the CSR and SR were added as corrective action to an event identified in LER 93-048-02. Each EDG cell has an alarm in the Control Room indicating high ambient temperatures (about 115°F).

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Indian Point 3	05000286	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	5 OF 6
		95	-- 006 --	00	

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- To assure long term compliance with the requirements of Appendix R, the following programmatic corrective actions have been completed: Appendix R Analysis updated, Fire Hazards Analysis updated, the Fire Area drawings revised, procedure for modification review revised, detailed fire protection Operational Specifications developed, plant modifications installed between 1984 and 1995 reviewed, Multiple High Impedance Fault (MHIF) study performed, safe shutdown procedures revised, fire barrier penetration seals reinspected/reevaluated, fire barrier penetration drawings updated and a long term compliance program implemented. The long term compliance program requires continual updating and revision of the above documents and procedures to keep them current and reflect any new issues that may be identified.
- The IP3 Fire Protection Design Basis Document will be completed by December 29, 1995. This repeats commitment IPN-95-003-04.
- The revised safe shutdown procedures have been walked down and the operators have been trained in them.
- A commitment has been made to revise the Fire Protection/Appendix R procedure (FPES-04B) to address areas required. These areas will include changes to Appendix R strategy / commitments. This revises IPN-95-003-03.
- The LER will be updated to report the cause of the event and an evaluation of the effects on public health and safety. The supplement will be submitted by July 31, 1995.

ANALYSIS OF EVENT

This event is reportable under 10 CFR 50.73.(a)(2)(ii)(B). The 1984 Appendix R analysis did not adequately evaluate the loss of ventilation due to spurious ventilation system operation or spurious CO₂ system operation due to fire. A fire in fire area YARD-7 could have made the SR and CSR ventilation systems inoperable and a fire in fire area TBL-5 could have made the SR, CSR and EDG cell ventilation systems inoperable when they were required to support safe shutdown of the plant. The design basis required the support function to be provided.

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Indian Point 3	05000286	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	6 OF 6
		95	-- 006 --	00	

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Additional events related to fire protection are discussed in LERs 95-001, 002, and 003, 94-010, and 012, 93-007, 018, 022, 029, 031, 037, 038, 041, 051, and 055, and 92-010, 016 and 017.

SAFETY SIGNIFICANCE

The past potential effect on the public health and safety is under evaluation and will be reported in a supplement to this LER.

No fire has occurred which induced a loss of ventilation in the SR, CSR or EDG cells due to spurious ventilation system operation or spurious CO₂ system operation.

A preliminary assessment by Fire Protection indicates that the effect on public health and safety would have been minimal for a fire in the TBL-5 fire area. The combustibles in the area are not significant, it is unlikely that the fire would be have caused multiple spurious signals in the three EDG CO₂ systems because of construction features, sprinkler systems to quickly extinguish the fire, and the area is frequently traveled. Assessment of a hypothetical fire in the YARD-7 fire area is ongoing.