

Indian Point 3  
Nuclear Power Plant  
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John H. Garrity  
Resident Manager

November 12, 1993  
IPN-93-140

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Stop PI-137  
Washington, D.C. 20555

SUBJECT: Indian Point 3 Nuclear Power Plant  
Docket No. 50-286  
Licensee Event Report # 93-028-01  
Fuel Storage Building Ventilation System in  
as Condition Prohibited By Technical  
Specifications

Dear Sir:

The attached Licensee Event Report (LER) 93-028-01 is hereby submitted in accordance with the requirements of 10CFR50.73. This event is of the type defined in the requirements pursuant to 10CFR50.73(a)(2)(i)(B). Also attached are the commitments made by the Authority in this LER revision. This submittal provides the information committed to in LER 93-028-00 and contains editorial changes to improve clarity.

Very Truly Yours,

A handwritten signature in cursive script, appearing to read 'JH Garrity'.

John H. Garrity  
Resident Manager  
Indian Point 3 Nuclear Power Plant

JHG/vjm

cc: See Next Page

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PDR ADOCK 05000286  
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*JE22*

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U.S. NRC Resident Inspector's Office  
Indian Point 3

Attachment  
List of Commitments

Number	Commitment	Due
IPN-93-140-01	Surveillance test 3PT-R032A will be revised to require documentation on the "as found" and "as left" flow rates with guidance on how to adjust flow and document that adjustment.	December 15, 1993

# LICENSEE EVENT REPORT (LER)

<b>FACILITY NAME (1)</b> Indian Point Unit 3	<b>DOCKET NUMBER (2)</b> 05000286	<b>PAGE (3)</b> 1 OF 5
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**TITLE (4)**  
Fuel Storage Building Emergency Ventilation System In A Condition Prohibited By Technical Specification due to Human Error

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
01	02	92	93	-- 028 --	01	11	12	93	FACILITY NAME	DOCKET NUMBER
										05000
										05000

<b>OPERATING MODE (9)</b> N	<b>POWER LEVEL (10)</b> 000	<b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)</b>								
		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 Abstract below and in Text, NRC Form A)				
		20.405(a)(1)(iv)		50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)					
		20.405(a)(1)(v)		50.73(a)(2)(iii)	50.73(a)(2)(x)					

**LICENSEE CONTACT FOR THIS LER (12)**

NAME Steve Prussman, Licensing Engineer	TELEPHONE NUMBER (Include Area Code) (914) 736-8029
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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
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO					

**ABSTRACT**

On January 2, 1992 with the plant at 100 percent reactor power, the Quality Assurance Department identified an error in the operability criteria for Surveillance Test 3PT-R032A, "Fuel Storage Building Filtration System" performed August 13, 1990. On August 6, 1993, New York Power Authority determined that the error resulted in a violation, between January 1989 and January 1992, of Technical Specification 4.5.A.6.b (2) which requires a minimum of 90 percent of the accident design flow rate of the Fuel Storage Building Emergency Ventilation System fans. At the time of the discovery, the system was operable and remains operable based on the results of surveillance testing since January 1992. A Temporary Procedure Change (TPC) was issued February 14, 1992 to correct the operability criteria. The cause of this event was personnel error in writing and reviewing the procedure. This event did not cause a significant increase in risk to public health and safety.

**LICENSEE EVENT REPORT (LER)**  
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**DESCRIPTION OF EVENT**

On January 2, 1992 the Quality Assurance Department identified an error in Step 5.1.4 of the "Operability and Acceptance Criteria" section in Surveillance Test 3PT-R032A, "Fuel Storage Building Filtration System". Revision 4 to procedure 3PT-R032A, approved by Plant Operating Review Committee (PORC) April 28, 1987, allowed a +/- 20 percent variation in the 20,000 cfm air flow of the Fuel Storage Building Emergency Ventilation System (VG) fans (FAN). Technical Specification 4.5.A.6.b(2) requires a flow at least 90 percent of the accident design flow rate. The 20,000 cfm flow rate required to meet the Technical Specification was established during initial plant start up using drawing information (9321-F-40223) and FSAR Section 9.5.9.

Quality Assurance issued Corrective Action Request (CAR) #607 on January 2, 1992, to identify the non-conformance in 3PT-R032A Revision 4 and to identify the failure of the surveillance test procedure performed August 13, 1990 to meet technical specification requirements. Short term corrective action was taken by initiating a Temporary Procedure Change (TPC). On February 14, 1992, TPC #92-092-SV to 3PT-R032A was issued to require a test flow range of 18,000 - 20,000 cfm. A records review by the Performance and Reliability Supervisor identified no engineering design document establishing the design accident flow rate. The design value of 20,000 cfm was used as the accident design flow rate in the TPC. No reportable event was identified from CAR #607 because the Performance and Reliability Supervisor and the Technical Services Superintendent concluded that the design accident flow was zero (FSAR section 14.2.1, footnote on page 9, states that the Dose Reduction Factor (DRF) for the charcoal filtration system is 1). On July 22, 1993 the Resident Manager decided that a voluntary report should be made of the event (i.e. the failure to maintain the Fuel Storage Building Emergency Ventilation System flow above 90 percent). As input to the voluntary report, Corporate Radiological Engineering performed an analysis on August 9, 1993, to identify the safety significance of no filtration, and concluded that a (DRF) of 10 had been used in the FSAR analysis. The January 2, 1992 event was determined to be a violation of Technical Specification 4.5.A.6.b(2), and therefore reportable, when this calculation was performed.

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A review of 3PT-R032A history shows that Revision 0 allowed a +/- 20 percent variation of design flow. This was revised to +/- 10 percent to meet the Technical Specification in Revision 2 (approved by PORC March 24, 1982). Revision 4 changed the acceptance criteria to allow +/- 20 percent variation of design flow. Revision 4 was reviewed by the writer and stamped "Biennially Reviewed No Revision Required" by the Performance and Reliability Supervisor on March 29, 1989 and January 13, 1992 without identifying the error.

The results of filtration tests since August 1979 were reviewed by Performance and Reliability department. Two out of nine tests have not met technical specification requirements. Those two tests, January 24, 1989 and August 13, 1990 resulted in flows of 17,069 and 16,274 cfm respectively. The low flow in January 1989 resulted from instructions to a Performance and Reliability Technician to adjust the inlet flow control vanes. The purpose was to reduce the potential for vibration (the fan was rebuilt and reinstalled in December 1988) by lowering the flow within Surveillance Test allowables. The adjustment was undocumented. The system passed the next surveillance test in January 1992. The reason for the flow increase to 19,293 cfm in the January 1992 surveillance test could not be conclusively established. Performance and Reliability concluded that the inlet flow control vanes were adjusted during the January 1992 surveillance test in order to meet the flow levels required by CAR #607. This is considered to be more probable than the system adjusting itself because there is a history of undocumented adjustments of the inlet flow control vanes. The design of the inlet flow control vanes does not allow system operation to change flow because the vanes are not easy to move (i.e., the air flow around the vanes would not supply enough force to overcome the stiffness). Undocumented adjustments of the inlet flow control vanes is a violation of procedure AP-9, "Work Control".

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CAUSE OF EVENT

The cause of this event was personnel errors resulting from inattention to detail. At the time 3PT-RO32A was revised to allow a flow variation of +\ - 20 percent, the Performance and Reliability department was revising other HVAC surveillance tests to allow the same flow variation. The Performance and Reliability Supervisor concluded that the flow variation in 3PT-RO32A was inadvertently changed during the general revision to filtration tests and that the Technical Specification requirement was overlooked by both the writer and reviewer due to a failure to pay attention to detail. The personnel errors were compounded by the limited review at the next two biennial review periods by the writer.

CORRECTIVE ACTION

Engineering analysis to determine the design accident flow rate is scheduled for completion January 30, 1994 and is being tracked as a design basis document open item, FSBHVS-OI-20. When the engineering work is complete, Surveillance Test 3PT-RO32A and the FSAR will be revised, if necessary to identify design accident flow rate. An FSAR change has been initiated to correct the assumed (DRF) for the fuel handling accident from 1 to 10.

Personnel in the Performance and Reliability Department have been instructed to use TSP-42 and AP-3 which provides guidance in procedure development and review that is intended to assure Technical Specification requirements are not revised during procedural revisions. To avoid undocumented adjustments, personnel in the Performance of Reliability Department have also been instructed not to make adjustments to equipment during surveillance testing outside the guidelines of AP-9, "Work Control."

Surveillance test 3PT-RO32A will be revised to require documentation on the "as found" and "as left" flow rates with guidance on how to adjust flow and document that adjustment. This is scheduled for December 31, 1993.

The extent of condition was determined by a review of all filtration tests for compliance with Technical Specifications. Other discrepancies were noted and corrected but none resulted in a Technical Specification violation.

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

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**ANALYSIS OF EVENT**

This event is reportable under 10CFR50.73(a)(2)(i)(B) as a violation of Technical Specifications. Technical Specification Section 4.5.A.6.b(2) states that, "Prior to handling of irradiated fuel... the flow rate of the system fans shall be shown to be at least 90% of the accident design flow rate". Plant operations have been in violation of this Technical Specification when handling fuel between January 1989 to January 1992. The emergency filtration system was lined up to support fuel handling or work over the spent fuel pool for a total of up to 312 days during this period. Two similar events were recently reported. LER 93-024-00 reported the revision of a maintenance schedule so that the duration violated Technical Specification. LER 93-023-00 reported the revision of a surveillance test so that it deleted the requirements of the Technical Specification.

**SAFETY SIGNIFICANCE**

This event had no significant effect on the health and safety of the public. There is reasonable assurance that the Fuel Storage Building Emergency Filtration System would have performed its intended function at flow rates of 16,000 cfm. Test personnel observed that negative pressures caused difficulty opening doors when system flows were approximately 16,000 cfm. When the fuel storage building is under a negative pressure, unfiltered radioactive release is prevented or minimized. The design basis accident analysis in FSAR Section 14.2.1 identified a Thyroid dose of 1.3 rem. A computer run to determine the effects of no filtration identified a thyroid dose of 13.3 rem, an increase of about a factor of 10. This remains well within the requirements of 10 CFR 100.