

Indian Point 3
Nuclear Power Plant
P.O. Box 215
Buchanan, New York 10511
914 736.8001



John H. Garrity
Resident Manager

August 21, 1993
IPN-93-098

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

Subject: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
Licensee Event Report 93-028-00, "Fuel
Storage Building Emergency Ventilation System
in a Condition Prohibited By Technical
Specification Due to Human Error"

Dear Sir:

The attached Licensee Event Report (LER) 93-028-00 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.

Very truly yours,

A handwritten signature in cursive script that reads 'John H. Garrity'.

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

JHG/JC/vjm

cc: See next page

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PDR ADDCK 05000286
S PDR

Handwritten initials, possibly 'JHG', written in a cursive style in the bottom right corner of the page.

Mr. Thomas T. Martin
Regional Administrator
Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Road
King Of Prussia, Pennsylvania 19406-1415

Institute of Nuclear Power Operations Records
Center
700 Galleria Parkway
Atlanta, Georgia 30339-5957

U.S. Nuclear Regulatory Commission
Resident Inspectors' Office
Indian Point Unit 3

IPN-93-98
Attachment
List of Commitments

Number	Commitment	Due
IPN-93-98-01	The cause of the flow increase after the August 1989 surveillance test has not yet been determined. An LER revision will be issued before restart identifying the cause of the flow increase.	November 15, 1993
IPN-93-98-02	The FSAR will be revised to correct the assumptions for filter usage during the fuel handling accident (Section 14.2).	July 1994 (next FSAR annual update)
IPN-93-98-03	Engineering action to establish the bases for the correct design accident flow rate has been started. When complete, Surveillance Test 3PT-R032A and the FSAR will be revised, if necessary, to identify the correct design accident flow rate.	January 30, 1994

LICENSEE EVENT REPORT (LER)

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TITLE (4)
Fuel Storage Building Emergency Ventilation System In A Condition Prohibited By Technical Specifications 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 --	00	08	21	93	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	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)			(Specify in Abstract below and in Text, NRC Form A)
	20.405(a)(1)(iv)						50.73(a)(2)(ii)			
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)		
X	YES (If yes, complete EXPECTED SUBMISSION DATE).	NO		MONTH	DAY	YEAR
				11	15	93

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. 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 until engineering establishes a basis for the design operating flow. 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.

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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 nonconformance 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. Final resolution will be based on engineering action to establish a basis for the design accident flow rate. 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). 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.

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

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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 cause of the flow increase after the August 1989 surveillance test (it passed the January 1992 surveillance test) has not yet been determined. An LER revision will be issued before restart identifying the cause of the flow increase.

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 action to determine the design accident flow rate is scheduled for completion January 30, 1994 and is being tracked as a design base 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 PFM-3 "Surveillance and Engineering Acceptance Test Preparation", and AP-3, "Procedure Preparation, Review and Approval", which provide guidance in procedure development and review that is intended to assure Technical Specification requirements are not revised during procedure revisions. 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.

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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 Specifications. LER 93-023-00 reported the revision of a surveillance test so that it deleted the requirements of the Technical Specifications.

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.