

Consolidated Edison Company of New York, Inc. Indian Point Station Broadway & Bleakley Avenue Buchanan, NY 10511 Telephone (914) 734-5340

July 17, 1997

Re: Indian Point Unit No. 2 Docket No. 50-247 LER 97-14-00

Document Control Desk US Nuclear Regulatory Commission Mail Station P1-137 Washington, DC 20555

The attached Licensee Event Report LER 97-14-00 is hereby submitted in accordance with the requirements of 10 CFR 50.73.

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Attachment

cc: Mr. Hubert J. Miller Regional Administrator - Region I US Nuclear Regulatory Commission 475 Allendale Road King of Prussia, PA 19406

> Mr. Jefferey F. Harold, Project Manager Project Directorate I-1 Division of Reactor Projects I/II US Nuclear Regulatory Commission Mail Stop 14B-2 Washington, DC 20555

Senior Resident Inspector US Nuclear Regulatory Commission PO Box 38 Buchanan, NY 10511 IED)

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(6-89) U.S. NUCLEAR REGULATORY COMMISSION APPROVED OMB NO. 3150-104																											
J	EXPINES: 43092 ESTIMATED BURDEN PER REPORSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.											HIS RD 2DS AR TO OF															
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	Indian Point Unit No. 2 0 5 0 0 0 2 4 7 1 0 0 0										06																
TITLE (4))																				-	4					_
r	Non-compliance with Overpressure Protection System Technical Specification																										
E	VENT D	ATE ((5)			l	LER NUM	BER (6)			81	EPOR	T DATE	E (7)	T			C	OTHER FACILITIES INVOLVED (8)								
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(10)				0	20.	405(a)((1)(8)				50.36(c)	(2)			L	50.73 (a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC For				t m			
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YES (If yes, complete EXPECTED SUBMISSION DATE)						X	X NO							SUB	MISSIO	N											
ABSTRAC	T (Limi	it to 14	100 sp	oaces	, і.е., арр	roximat	tely fifteen	single-s	pace typ	owritte	n lines) (1	6)															
		B	letv	vee	en apj	orox	cimate	ely 0	230	hou	irs on	Jui	ne 1	4, 19	97 a	and	1 apr	oroxi	mate	elv	165	5 h	ours				
		о	n J	un	e 17,	199	97, wl	nile t	he p	lan	t was	at c	cold	shute	low	n v	vith	react	or c	ool	ant s	syst	tem				
	at atmospheric pressure and temperature at approximately 90F pressurizer level was																										
	greater than 30 percent concurrent with an inoperable Overpressure Protection																										
System (OPS). This is a condition prohibited by Technical Specifications. The non-																											
	compliant condition occurred in connection with a vacuum fill and vent evolution of																										
	the reactor coolant system and is attributable to inadequate procedural guidance, a																										
	scheduling deficiency, and inadequate operator knowledge of the OPS and applicable																										
	Technical Specifications. Upon discovery of the non-compliant condition pressurizer																										
	level was reduced to 30 percent. The safety significance of this event is minimal as																										
	the reactor coolant system was not pressurized by any mechanism that the OPS																										
	protects against during the time the OPS was inoperable.																										
	protects against during the time the Or's was inoperable.																										

NRC FORM 366 (6-89)	366 U.S. NUCLEAR REGULATORY COMMISSION						
LICENSEE EVENT TEXT CONTI	REPORT (LER)	EXPIRES: 4/30/92 ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH TH INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWAL COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AN REPORTS MANAGEMENT BRANCH (P530), U.S. NUCLE. REGULATORY COMMISSION, WASHINGTON, DC 2055, AND TO TI PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE / MANAGEMENT AND BUDGET, WASHINGTON, DC 2050.					
ACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)	PAGE (3)				
Indian Point Unit No. 2	0 5 0 0 0 2 4 7	YEAR SECONDAL NUMBER 9 7 - 0 1 4 - 0	0 0 2 OF 0				
EXT (If more space is required, use additional NRC Form 366A's) (17	n)						
PLANT AND SYSTEM IE	DENTIFICATION:						
Westinghouse 4-Loop Pressur	rized Water Reactor						
IDENTIFICATION OF O	CCURRENCE:						
Plant operating restrictions re the Overpressure Protection S	equired by Technical Specifications System was inoperable.	were not implemented	when				
EVENT DATE:							
June 17, 1997							
REPORT DUE DATE:							
July 17, 1997							
REFERENCE :							
CITRS (Condition Identificat	ion and Tracking System) No. 97-I	602399					
PAST SIMILAR OCCURR	ENCES:						
None							
DESCRIPTION OF OCCU	JRRENCE:						
On June 14, 1997 during a ref and one pressurizer safety valv Pressurizer level was increased safety valve was reinstalled. T the testing of the pressurizer p during the refueling outage, has after completion of the vacuum	fueling outage, the reactor coolant s we was removed to provide a suction I to 80 percent as part of the fill pro- The Overpressure Protection System power operated relief valves (PORV ad not been completed. Pressurizer m fill and vent evolution, and cold a	system (RCS) was being n path for the vacuum f ocess, and the pressurize n (OPS) was not operab s), which were replaced level remained at 80 per shutdown operation at t	g filled ill. er le as ercent this				

IC FORM 366 89)		APPROVED OMB NO. 3150-104				
	LICENSEE EVENT REF TEXT CONTINUA	PORT (LER) ATION	EXPIRES: 4/30/92 ESTIMATED BURDEN PER RESPONSE TO COMPLY WIT INFORMATION COLLECTION REQUEST: 50.0 HRS. FOI COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORI REPORTS MANAGEMENT BRANCH (P-530), U.S. NI, REGULATORY COMMISSION, WASHINGTON, DC 20555, AND PAPERWORK REDUCTION PROJECT (3/50-0104), OFFIK MANAGEMENT AND BUDGET, WASHINGTON, DC 2053.			
CILITY NAME (1)	·····	DOCKET NUMBER (2)	LER NUMBER (6) PAGE (3)			
Indian Poi	int Unit No. 2	0 5 0 0 0 2 4 7	YEAR OLUMBER NUMBER 9 7 - 0 1 4 - 0 0 3 OF 0			
DE	SCRIPTION OF OCCURR	ENCE (continued):				
ider requ 30 j	ntified that the pressurizer leve uired by Technical Specificatic percent by 1655 hours.	el was not restricted to less than on 3.1.A.4.a, Figure 3.1.A-3. Pr	n or equal to 30 percent as ressurizer level was reduced to			
AN	ALYSIS OF OCCURRENC	CE:				
tem RCS acco rece whe to c G li (1)	perature is less than or equal to S pressure to exceed 10 CFR 5 complish the pressure reduction eipt of the appropriate signal, a en the RCS is below a prescribe cause the PORVs to open at a p mits for the following events: startup of a reactor coolant p and the steam generator seco	to 305F to prevent these incide 0, Appendix G limits. The syst and arming is accomplished eith ed temperature or manually by pressure sufficiently low to prev pump (RCP) with no other read ondary side water temperature	nts from causing the peak em uses the PORVs to he PORVs will open upon her automatically by the OPS the operator. The OPS is set yent exceeding the Appendix ctor coolant pumps running hotter than the RCS water			
(1)	temperature;	1				
(2)	startup of one safety injectio	charging pumps operating;				
(4)	loss of residual heat removal decay heat or RCP heat; or	(RHR) causing pressure rise fr	om heat additions from core			
(5)	inadvertent activation of the	e pressurizer heaters.				
The	RCS is protected against over	pressure transients by:				
(1)	restricting the number of cha energized to that which can the gas space in the pressuria	arging pumps and safety injecti be accommodated by the POR' zer (OPS inoperable);	on pumps that can be Vs (as part of the OPS) or			
(2)	providing administrative con primary water temperature is without OPS operable); or	ntrols on the starting of a reactors s less than the secondary water	or coolant pump when the temperature (with or			

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LICENSEE EVENT REPORT (I TEXT CONTINUATION	NUCLEAR REGULATORY COMMISSION APPROVED OMB NO. 3150-104 EXPIRES: 4/30/92 ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THINFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARE COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AN REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEA REGULATORY COMMISSION, WASHINGTON, DC 20553, AND TO TH PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE COMANAGEMENT AND BUDGET, WASHINGTON, DC 20503.
FACILITY NAME (1)	DOCKET NUMBER (2) LER NUMBER (6) PAGE (3)
Indian Point Unit No. 2 TEXT (If more space is required, use additional NRC Form 366A's) (17)	VEAR SECUENTIAL NUMBER REVISION NUMBER 0 5 0 0 2 4 7 9 7 - 0 1 4 - 0 0 4 OF 0

ANALYSIS OF OCCURRENCE (continued):

(3) providing vent area from the RCS to containment for those situations where neither the PORVs nor the available pressurizer gas space are sufficient to preclude the postulated pressure transient (OPS inoperable).

When pressurizer level is between 30 and 85 percent of span, protection is provided through the use of the PORVs (OPS operable). When pressurizer level is less than 30 percent of span, additional restrictions on pressurizer pressure make reliance on the PORVs unnecessary since the gas compression resulting from the insurge of liquid from the RCS pump start is insufficient to cause RCS pressure to exceed the Appendix G limits. The same method, i.e., control of pressurizer pressure and level, is used to accommodate the mass insurge into the pressurizer from safety injection and charging pump starts when the PORVs are not operational.

Technical Specification 3.1.A.4 requires that the OPS shall be armed and operable when the RCS temperature is less than or equal to 305F. Table 3.1.A-2 permits the OPS to be inoperable at or below 305F based on various operating restrictions or establishment of a vent area to the containment atmosphere. Without a vent area to the containment atmosphere, Table 3.1.A-2 imposes operating restrictions which are contained on Figures 3.1.A-2 and 3.1.A-3. Figure 3.1.A-2 allows pressurizer level greater than 30 percent if no safety injection (SI) pumps are energized (power available to start pump) and only one charging pump is energized. Figure 3.1.A-3 allows one safety injection pump and three charging pumps to be energized if pressurizer level is less than or equal to 30 percent.

In this instance, the OPS was inoperable during and after the vacuum fill and vent evolution, as the PORVs had not been successfully tested. Using applicable procedures (POP 1.1 and SOP 1.1.1) and the Technical Specifications, the operators deenergized two SI pumps to comply with Figure 3.1.A-3 for operation with an inoperable OPS. While the operators had determined that the RCS temperature and pressure permitted operation with the OPS inoperable, they either did not recognize or did not properly evaluate the note on the figure which specifies the requirement for pressurizer level to be less than or equal to 30 percent. During this period, pressurizer level was approximately 80 percent, thereby exceeding the level requirement. Further, the procedures the operators were using did not contain requirements for OPS operability and did not adequately direct them to procedure steps which contained relevant guidance.

While the plant was in a condition with pressurizer level greater than permitted, RCPs, safety injection pumps, charging pumps, and pressurizer heaters were not operated and decay heat

NRC FORM 366 (6-89)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED OMB NO. 3150-104 EXPIRES: 4/30/92 ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS						
LICENSEE EVENT RE TEXT CONTINU	INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.							
FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)	PAGE (3)					
Indian Point Unit No. 2	0 5 0 0 0 2 4	YEAR SEQUENTIAL NUMBER REVISION NUMBER 7 9 7 - 0 1 4 - 0 0	0 5 OF 0 6					
ANALYSIS OF OCCURRENCE (continued):								
removal was being accomplished by the RHR system. Therefore, the RCS was not subjected to a potential overpressure condition so the safety significance of the event is minimal. This report is being made pursuant to 10 CFR 50.73(a)(2)(i)(B), which requires that "The licensee shall report any operation or condition prohibited by the plant's Technical Specifications."								
CAUSE OF OCCURRENCE:								

Causes for this event are attributable to the following:

- (1) The Safety Evaluation of procedure SOP 1.1.1, "Vacuum Filling and Venting the Reactor Coolant System," Revision 0 failed to identify and address plant operational requirements to prevent a potential inadvertent overpressurization of the RCS as required by Technical Specifications. This resulted in no guidance in the SOP to alert the operator to OPS requirements and alternatives.
- (2) The vacuum fill and vent evolution was not managed as an infrequently performed test or evolution. This contributed to inadequate assessment of an available RCS vent path, the need for OPS to be operable, and missed pertinent guidance in Technical Specification Figure 3.1.A-3. This was a missed opportunity to thoroughly review the evolution and avoid missing the requirement.
- (3) The procedural connection between procedure POP 1.1 ("Plant Heatup"), which is the procedure that directs the operators to SOP 1.1.1, and SOP 1.1.1 was less than adequate. Thus, relevant information in POP 1.1 was not used. In addition, the noted information on Technical Specification Figure 3.1.A-3 is embedded with three notes on unrelated subjects and printed in the gridwork of the graph. This caused a visual obscuring of important information resulting in oversight of the 30 percent criterion that defines the usable pressurizer level bound for the graph.
- (4) The refueling outage schedule did not use a "hard logic" connection to ensure that OPS operability testing was completed prior to commencing SOP 1.1.1. This allowed a conflict to exist between actual plant conditions (OPS inoperable) and evolution requirements (OPS operable).
- (5) The operators did not fully appreciate the complex relationships between OPS/vent path requirements, pressurizer level, and vacuum refill rig alignment. This affected their ability to successfully execute SOP 1.1.1.

NRC FORM 366	U.S. NUC	CLEAR REGULATORY COMMISSION						
(6-89)	LICENSEE EVENT REPORT (LEF	7)	APPROVED OMB NO. 3150-104 EXPIRES: 4/30/92 ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-S30), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.					
FACILITY NAME (1)	· · · · ·	DOCKET NUMBER (2)	LER NUMBER (6) PAGE (3)					
Indian Poin	t Unit No. 2	0 5 0 0 0 2 4 7	YEAR SEQUENTIAL NUMBER REVISION NUMBER 9 7 - 0 1 4 - 0 0 6 OF 0 6					
TEXT (If more space is i	required, use additional NRC Form 366A's) (17)							
COI	RRECTIVE ACTIONS:		. ·					
Corr	ective actions resulting from this event	t are:						
(1)	(1) Revise the Safety Evaluation to address OPS/plant configuration issues. This is scheduled to be completed by October 31, 1997.							
(2)	(2) Define and implement a methodology in SAO-202 ("Conduct of Infrequently Performed Tests or Evolutions") for determining when an evolution/test becomes an infrequent evolution/test based on time between evolutions and risk (complexity, potential consequences, etc.). This is scheduled to be completed by September 30, 1997.							
(3a)	(3a) Establish a clear information trail between SOP 1.1.1, POP 1.1, and Technical Specification requirements for OPS operability and alternatives. This should include a caution in SOP 1.1.1 prior to exceeding 30 percent pressurizer level. This is scheduled to be completed by October 31, 1997.							
(3b)	Change the title of POP 1.1 to reflect operating procedure for cold shutdow 31, 1997.	newly revised purpos n. This is scheduled t	e and/or develop a plant to be completed by October					
(3c)	Revise Technical Specification Figure for pressurizer level to be less than or this in the ongoing Improved Technic	3.1.A-3 to clearly cau equal to 30 percent. cal Specifications Proje	tion user of the requirement Our intent is to accomplish ect.					
(3d)	Evaluate and revise other Technical S information to users. Our intent is to Technical Specifications Project.	pecification figures as accomplish this in th	required to provide clearer e ongoing Improved					
(4)	Establish a "hard logic" for OPS oper- scheduled to be completed by April 3 outage).	ability as a prerequisit 0, 1998 (to be used di	e to vacuum fill. This is uring the next refueling					
(5a)	Establish consistent logging practices Specification compliance. This is sch	for OPS requirements eduled to be complete	/operability/Technical d by October 31, 1997.					
(5b)	Conduct operator requalification train Specifications. This is scheduled to b	ning for the OPS and a completed by Octob	applicable Technical er 31, 1997.					

NRC Form 366 (6/89)