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August 31, 1989

Re: Indian Point Unit No. 2
Docket No. 50-247
LER 89-11-00

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

The attached Licensee Event Report LER 89-11-00 is hereby submitted in accordance with the requirements of 10 CFR 50.73.

Very truly yours,

Attachment

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

Mr. Donald S. Brinkman, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects I/II
US Nuclear Regulatory Commission
Mail Stop 14B-2
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Buchanan, NY 10511

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Indian Point Unit No. 2	0 5 0 0 0 2 4 7	1 OF 0 4

TITLE (4)
Emergency Power Supply and Service Water Header 0.0.5.

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 NAMES	DOCKET NUMBER(S)
0 8	0 1	8 9	8 9	— 0 1 1	— 0 0	0 8	3 1	8 9		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
N		20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
1 0 0		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(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	TELEPHONE NUMBER
Bruce Shepard	AREA CODE 9 1 4 — 5 2 6 - 5 6 7 8

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	
B	B I	S T R	Z 0 1 0	Y							

SUPPLEMENTAL REPORT EXPECTED (14)

	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)				
X NO				

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

LER 89-11

On Tuesday, August 1, 1989, IP-2 was operating with Emergency Diesel Generator #23 and Service Water Pump #23 removed from service. At approximately 0815, the differential pressure for the remaining two non-essential service water pump strainers increased above the allowable value. An evaluation by the operators began, and at 0840 the entire non-essential service water system was declared inoperable placing the plant into Technical Specification (TS) 3.0.1, and requiring a 1 hour notification and subsequent plant shutdown to hot shutdown within 7 hours.

At 0940 non-essential service water pump #23 was made operable by strainer cleaning, and at 1330 a second non-essential service water pump (#22) became operable. TS 3.0.1 was incorrectly interpreted to be satisfied at 0940 although it was actually satisfied at 1330, 4 hours and 50 minutes after TS 3.0.1 was entered. The health and safety of the public were not affected by this event.

PLANT AND SYSTEM IDENTIFICATION:

Westinghouse 4-Loop Pressurized Water Reactor, Auxiliary Electrical System (Emergency Diesel Generators) and Service Water System (Designated Non-essential Header).

IDENTIFICATION OF OCCURRENCE:

The evaluation identified that the non-essential service water system was inoperable concurrent with Emergency Diesel Generator #23 inoperable. The plant was found to be in TS 3.0.1 condition, which is applicable to plant conditions in excess of those prescribed by TS 3.7.B.1 and 3.3.F.2.b. The scope of the TS 3.0.1 conditions applicable to this event were not fully recognized and a premature exit of TS 3.0.1 was made, prompting a followup hotline notification.

REPORTABILITY DETERMINATION DATE:

August 1, 1989

REPORT DUE DATE:

August 31, 1989

REFERENCES:

SOR 89-458 and SOR 89-458A

PAST SIMILAR OCCURRENCE:

LER 88-015

DESCRIPTION OF OCCURRENCE:

On Tuesday, August 1, 1989, IP-2 was operating at 100% power with Emergency Diesel Generator(EDG) #23 removed from service for repairs to its jacket water cooler. The designated non-essential service water header was served by #21, 22 and 23 service water pumps(SWP). At approximately 0815, the differential pressure for all the non-essential service water strainers increased above the allowable value because of debris from the Hudson River. Initial troubleshooting by the operator began, by switching pumps and attempting to reduce differential pressure across strainers. At 0840 (approximately 25 minutes later) the operators declared the non-essential service water system (all three non-essential SWP) inoperable, a condition in excess of TS 3.3.F.2.b.

Upon the declaration of inoperability, TS 3.0.1 was entered, requiring a 1 hour notification starting at 0840, and subsequent plant entry into hot shutdown within 7 hours.

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

DESCRIPTION OF OCCURRENCE: (continued)

While the NRC was being notified at 0940, non-essential service water pump #23 became operable (the plant was still in a 24 hour LCO for TS 3.3.F.2.b and, although not recognized, TS 3.0.1 was still applicable since the plant was outside TS 3.7.B.1). Shutdown of the plant was not begun, nor was an NUE declared, since the SWS, SRO's and Watch Engineer/STA prematurely exited TS 3.0.1 at that time not realizing the plant was still in a TS 3.0.1 condition. The emergency diesel generator loading analysis performed in the Spring of 1989 determined that EDG #21 could be overloaded when EDG #23 and SWP #22 are inoperable. Under these conditions, EDG #21 must also be considered inoperable and along with the continued inoperability of EDG #23, this represented a condition requiring that TS 3.0.1 be applied. At 1330 non-essential SWP #22 became operable. TS 3.0.1 should have been exited at that time, 4 hours and 50 minutes after TS 3.0.1 was entered (the 7 day LCO for EDG #23 out of service would still have been in effect).

ANALYSIS OF OCCURRENCE:

When EDG #23 was removed from service to perform maintenance, the LCO specified in TS 3.7.B.1 was properly entered and a 7 day LCO was declared. The removal from service of non-essential SWP #23 for maintenance did not result in any additional LCO since TS 3.3.F.2 only requires two SWPs on the nonessential header. The removal from service of non-essential SWP #21 & 22, due to debris collection in the strainer, caused the operators to recognize the plant was in a TS 3.0.1 condition since no operable SWPs remained on the designated non-essential header, thereby exceeding TS 3.3.F.2.b conditions.

SWP #23 was returned to service at 0940, supplying the non-essential header (the plant was still in TS 3.3.F.2.b since only one non-essential SWP was operational). Later in the day it was determined that placing SWP #23 in service with SWP #22 still out of service was not sufficient to satisfy the requirement of TS 3.7.B.1 pertaining to one inoperable EDG. That LCO permits one EDG to be inoperable for seven days provided off-site power sources are available and the two remaining EDGs and their associated engineered safety features are operable. The non-essential SWP on EDG #23 is designated a TS pump due to the potential for overloading EDG #21 during the switchover sequence of a design basis loss of coolant accident. Therefore, the EDG LCO was not satisfied because circumstances in excess of those addressed in TS 3.7.B.1 continued to exist, and TS 3.0.1 was therefore still applicable.

TS 3.0.1 should have been exited when SWP #22 became operable at 1330, 4 hours and 50 minutes after entry. In any case, entries into 3.0.1 are reportable pursuant to 10 CFR 50.73(a)(2)(i)(B) because the plant is operating with a condition outside the limits specified in the Technical Specifications.

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

CAUSE OF OCCURRENCE:

The unscheduled removal from service of SWPs #21 and 22 (due to high differential pressure across their strainers) during ongoing maintenance on EDG #23, resulted in the inability to comply with the requirements of the EDG LCO. This necessitated entry into TS 3.0.1. The non-essential header system could not be immediately restored, also necessitating entry into TS 3.0.1.

The inability of plant personnel to fully interpret the requirements of TS 3.7.B.1 resulted in the plant remaining in a TS 3.0.1 condition without the proper action (starting to proceed to hot shutdown and declaring an NUE) being taken.

CORRECTIVE ACTION:

The strainer for SWP #22 was repaired and returned to service which restored compliance to the EDG LCO and the non-essential service water header requirements. Additionally, as part of our ongoing plant improvements program, we will be replacing the existing travelling screens during 1991 (long lead time for equipment). This is expected to improve the river water quality prior to suction into the SWP strainers.

The need to enhance the ability of plant personnel to diagnose TS 3.7.B.1 conditions (twice in 10 months, see LER 88-015) is recognized. Corrective actions involve reinstruction of necessary plant personnel with regard to the full scope of conditions which impact this Technical Specification. An additional operator aid (e.g., a "cause and effect" matrix) addressing these conditions has been developed and is being used on a trial basis for evaluation.