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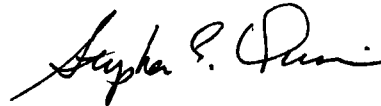
December 2, 1996

Re: Indian Point Unit No. 2
Docket No. 50-247
LER 96-22-00

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

The attached Licensee Event Report 96-22-00 is hereby submitted in
accordance with the requirements of 10 CFR 50.73.

Very truly yours,



Attachment

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

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

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US Nuclear Regulatory Commission
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LICENSEE EVENT REPORT (LER)

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-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)

Indian Point Unit No. 2

DOCKET NUMBER (2)

0 5 0 0 0 2 4 7

PAGE (3)

1 OF 0 4

TITLE (4)

Turbine Runback During Jumper Removal

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)														
1	1	0	1	9	6	9	6	0	2	2	0	0	1	2	0	2	9	6		0	5	0	0	0

OPERATING MODE (9)

N

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

POWER LEVEL (10)	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
1100	20.405(a)(1)(i)	50.38(c)(1)	50.73(a)(2)(v)	73.71(c)
	20.405(a)(1)(ii)	50.38(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iii)	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
James J. Maylath, Senior Engineer	9 1 4 7 3 4 - 5 3 5 6

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)

YES (If yes, complete EXPECTED SUBMISSION DATE)	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input checked="" type="checkbox"/>	<input type="checkbox"/>				

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

On November 1, 1996, with the unit operating at 100% power, an automatic turbine runback occurred, reducing power approximately 20 MWe. At the time of the runback, a jumper was being removed from a rod bottom bistable output circuit that is designed to initiate a turbine runback. During the jumper removal, the bistable output circuit was inadvertently interrupted. Actions are being taken to prevent such occurrences in the future. Following termination of the runback, correct rod position was verified, the cause of the runback was determined and the unit was restored to 100% power. This event had no adverse impact to safety. The Final Safety Analysis Report analyzes the dropped control rod occurrence with turbine runback and without turbine runback. Both analyses are acceptable.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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-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)

YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
96	022	00

Indian Point Unit No. 2

0500024796—022—0002 OF 04

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

PLANT AND SYSTEM IDENTIFICATION:

Westinghouse 4-Loop Pressurized Water Reactor

IDENTIFICATION OF OCCURRENCE:

Turbine Runback During Jumper Removal

EVENT DATE:

November 1, 1996

REPORT DUE DATE:

December 2, 1996

REFERENCES:

Condition Identification and Tracking System (CITRS) No. 96-E02451

PAST SIMILAR OCCURRENCE:

LER 96-009

DESCRIPTION OF OCCURRENCE:

On November 1, 1996 at 1458 hours, with the unit operating at 100% power, an automatic turbine runback occurred. Power was automatically reduced approximately 20 MWe with the runback. The "ROD BOTTOM ROD STOP" alarm was actuated. No automatic rod insertion occurred, and there was no observable change in indicated rod position for any control rod. Correct rod position was verified following termination of the runback, and the unit was restored to 100% power in accordance with operating procedures.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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PAGE (3)

Indian Point Unit No. 2

0 5 0 0 0 2 4 7 9 6

YEAR

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

ANALYSIS OF OCCURRENCE:

This report is being made because the turbine runback actuation constitutes a Reactor Protection System (RPS) actuation. This actuation is reportable under 10 CFR 50.73(a)(2)(iv).

Turbine runback can be initiated by any one of the 53 (one per control rod) rod bottom bistables or by any one of the four power range channels of the Nuclear Instrumentation System. The runback function was originally designed to compensate for reactor power and core distribution changes due to a dropped control rod. The automatic runback is designed to terminate at turbine power of no less than 85%. The dropped control rod occurrence is analyzed both with turbine runback and without turbine runback in the Final Safety Analysis Report for Indian Point 2. There were no dropped rods and no observable change in rod position for any control rod. Therefore, this occurrence did not have any impact on safety. There were no injuries to personnel or damage to equipment as a result of this event.

CAUSE OF OCCURRENCE:

The automatic turbine runback was caused by inadequate planning for removal of a jumper associated with the rod bottom bistable for Control Rod L-3. This resulted in a momentary interruption in the rod bottom bistable output circuit when the jumper was being removed from the rod bottom bistable output terminal points. A normally open contact from each rod bottom bistable output in a bank of control rods is connected in series with the coil of a control relay. If a control rod goes below the bistable setpoint, the output contact will open, and the control relay will de-energize. Normally closed contacts from each control relay are connected in parallel. This parallel combination is connected in series with a "Turbine Runback Defeat" switch in the turbine runback circuit. If any control relay de-energizes, the associated contact in the runback circuit will close. This will initiate a turbine runback if turbine power is above 85% power and the "Turbine Runback Defeat" switch is not engaged.

During removal of the jumper for Control Rod L-3, a technician inadvertently interrupted the rod bottom bistable circuit. The "Turbine Runback Defeat" switch was not engaged at that time (if this switch had been engaged, the runback would not have occurred). The automatic turbine runback circuit was actuated reducing power by 20 MWe. Following this momentary circuit interruption, the control relay was re-energized resulting in termination of the runback. The "Turbine Runback Defeat" switch was not engaged during the

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0 5 0 0 0 2 4 7 9 6 - 0 2 2 - 0 0 0 4 OF 0 4

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

jumper removal because the jumper (Jumper Log Entry Form and associated drawings) did not address the "Turbine Runback Defeat" switch. A review of appropriate procedures indicated that additional control on the installation and removal phases of jumpers is required to preclude recurrence.

CORRECTIVE ACTION:

Correct rod position was verified following termination of the runback, and the unit was restored to 100% power in accordance with operating procedures.

Potential impacts to the plant that can occur during the installation and removal phases of a jumper, as well as how these impacts can be precluded, must be considered during jumper evaluation (Jumper Log Entry Form and associated drawings). These considerations must be delineated and reinforced with personnel who prepare, install and remove the jumpers. Station Administrative Order (SAO) 206 will be evaluated and revised to provide additional controls. This event and any significant changes to SAO 206 shall be provided in continuing training programs as appropriate.

Following revision of SAO 206, presently installed jumpers will be reviewed to assure that there are no potential impacts to the plant when these jumpers are removed. Also, reuse of previously installed jumpers will be reviewed and documented in accordance with the newly revised SAO 206.