

Indian Point 3
Nuclear Power Plant
P.O. Box 215
Buchanan, New York 10511
914 739.8200



April 5, 1994
IPN-94-043

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 # 94-004-00
"Failure To Fulfill Channel Calibration Requirements, Due To
Personnel Error, Places The Plant In A Condition Prohibited By
Technical Specifications"

Dear Sir:

The attached Licensee Event Report (LER) 94-004-00 is hereby submitted in accordance with the requirements of 10CFR50.73. This event is of the type defined in the requirements pursuant to 10CFR50(a)(2)(i)(b). Also attached are the commitments made by the Authority in this LER.

Very truly yours,

A handwritten signature in black ink, appearing to read 'L. M. Hill'.

L. M. Hill
Resident Manager
Indian Point 3 Nuclear Power Plant

LMH/vjm

cc: See next page

9404110247 940405
PDR ADOCK 05000286
S PDR

Handwritten initials 'IF22' and the date '1/1' in the bottom right corner of the page.

cc: Mr. Thomas T. Martin
Regional Administrator
Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

INPO Records Center
700 Galleria Parkway
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U.S. Nuclear Regulatory Commission
Resident Inspectors' Office
Indian Point 3 Nuclear Power Plant

Attachment 1
List of Commitments

Number	Commitment	Due
IPN-94-043-01	Performance Engineering will incorporate ENG-547A and ENG-547B into the surveillance test program as refueling tests 3PT-R155A and 3PT-R155B, respectively.	April 29, 1994
IPN-94-043-02	I&C Engineering will revise surveillance tests 3PT-M01, 3PT-M13A, 3PT-M13B, and 3PT-R91 to include steps required for testing alarm functions.	April 29, 1994
IPN-94-043-03	I&C Engineering will revise the additional surveillance tests discussed in LER 94-004-00 to add certain alarm functional checks into the surveillance tests equipment operability criteria as necessary to correct identified deficiencies.	June 1, 1994
IPN-94-043-04	The I&C Engineering supervisor will require engineering personnel writing or revising surveillance tests to complete reading Technical Services Procedure, TSP-042, Revision 1, "Surveillance and Engineering Acceptance Test Preparation and Review" (which provides guidelines for the preparation and review of periodic surveillance tests).	April 15, 1994

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNEB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TITLE (4)
Failure To Fulfill Channel Calibration Requirements, Due To Personnel Error, Places The Plant In A Condition Prohibited By Technical Specifications

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
03	09	94	94	-- 004 --	00	04	05	94	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	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)							
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)							
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> OTHER							
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	(Specify in Abstract below and in Text, NRC Form 366A)							
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)								
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)								

LICENSEE CONTACT FOR THIS LER (12)

NAME S. Manzione, I&C Engineer	TELEPHONE NUMBER (Include Area Code) (914) 736-8783
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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).	<input checked="" type="checkbox"/> NO			

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

ABSTRACT

On March 9, 1994, with the plant in a cold shutdown condition, Instrumentation and Controls Department personnel determined that surveillance tests for several systems did not fulfill the channel calibration requirements of the Technical Specifications. As a result, certain alarm functions were not tested as required. The cause of the event was personnel error, misjudgment due to inadequate work practices when writing the initial surveillance tests and subsequent revisions. In addition, approximately 55 procedures that meet Technical Specifications testing requirements in the body of their procedures, failed to include certain alarm functional checks in the equipment operability section of the surveillance tests. Corrective actions include: training, revising the additional surveillance tests to include alarm functional checks in the equipment operability criteria and revising surveillance tests to include steps required for testing alarm functions.

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 INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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

DESCRIPTION OF EVENT

On March 9, 1994, with the plant in a cold shutdown condition (reactor power level at 5 cps, reactor coolant temperature at 109 degrees F, the reactor coolant system at atmospheric and pressurizer level at 57%), Instrumentation and Controls (I&C) Engineering Department personnel issued Deviation Event Report (DER) 94-245 to document that several surveillance tests did not fulfill the channel calibration requirements of the technical specifications. I&C Department personnel had determined that certain alarm or automatic control functions for their associated systems were not tested as required by the technical specifications. The I&C Department identified these deficiencies during a review of surveillance tests to ensure that all alarms and logic required by the technical specifications are adequately tested. The surveillance test review was performed as part of an evaluation to ensure the adequacy of the surveillance test program.

Technical Specification section 1.9.3 defines an instrument channel calibration as follows: "Adjustment of channel output such that it responds, with acceptable range and accuracy, to known values of the parameter which the channel measures. Calibration shall encompass the entire channel, including alarm or trip, and shall be deemed to include the channel functional test."

The following testing deficiencies have existed from the initial issuance of the surveillance tests until the currently indicated revisions:

- The operability of the automatic closure and open permissive logic circuits for Residual Heat Removal (RHR)(BP) suction valves MOV-730 and MOV-731 were not tested in accordance with Technical Specifications by the following surveillance tests:
 1. 3PC-R51B, Revision 2; "Saturation Margin Monitoring System Transmitters Check and Calibration"
 2. 3PC-R51C, Revision 2; "Saturation Margin Monitoring System Analog Components Check and Calibration"
- The upper detector high flux deviation and lower detector high flux deviation alarms were not tested in accordance with Technical Specifications by surveillance test 3PT-M01, Revision 44, "Nuclear Power Range Channels Functional".

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TEXT CONTINUATION

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

- The Reactor Trip Breaker Open Alarm to the Reactor Protection (JC) Logic Channels A and B were not tested in accordance with Technical Specifications by the following surveillance tests:
 1. 3PT-M13A, Revision 16; "Reactor Protection Logic Channel Functional Test"
 2. 3PT-M13B, Revision 16; "Reactor Protection Logic Channel Functional Test"
- The reactor trip first out, manual trip and reactor trip breaker open alarms were not tested in accordance with Technical Specifications by 3PT-R91, Revision 6, "Reactor Trip and Bypass Breaker Response Time and Trip Verification".

The logic circuitry for RHR suction valves MOV-730 and MOV-731 were demonstrated to be operable on March 15, 1994.

The I&C Engineering review is complete and has identified approximately 55 additional test procedures that failed to include alarm functional checks in the equipment operability section. I&C determined that these deficiencies did not violate technical specifications.

CAUSE OF THE EVENT

The cause of the event was personnel error, misjudgment due to inadequate work practices when writing the initial surveillance tests and when preparing subsequent revisions. The preparers and reviewers did not verify the tests against the technical specifications to ensure the systems were completely tested.

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CORRECTIVE ACTIONS

The following corrective actions have been or will be performed to correct deficiencies and to prevent recurrence of this event.

1. Engineering Acceptance Tests ENG-547A, Revision 1, and ENG-547B, Revision 1, were issued on March 14, 1994 to verify the operability of the automatic closure and open permissive logic circuitry for RHR suction valves MOV-730 and MOV-731. These tests were successfully performed on March 15, 1994 and verified the operability of the logic circuitry for both valves.
2. Performance Engineering will incorporate ENG-547A and ENG-547B into the surveillance test program as refueling tests 3PT-R155A and 3PT-R155B, respectively, by April 29, 1994.
3. I&C Engineering will revise surveillance tests 3PT-M01, 3PT-M13A, 3PT-M13B, and 3PT-R91 to include steps required for testing alarm functions. This action will be completed by April 29, 1994.
4. I&C Engineering will revise the additional surveillance tests discussed in LER 94-004-00 identified during the review to add alarm functional checks into the surveillance tests equipment operability criteria as necessary to correct identified deficiencies. This action will be completed by June 1, 1994.
5. The I&C Engineering supervisor will require engineering personnel writing or revising surveillance tests to complete reading Technical Services Procedure, TSP-042, Revision 1, "Surveillance and Engineering Acceptance Test Preparation and Review" (which provides guidelines for the preparation and review of periodic surveillance tests). The required reading will be completed by April 15, 1994.

ANALYSIS OF THE EVENT

This event is reportable under 10 CFR 50.73(a)(2)(i)(b) which requires reporting any operation or condition prohibited by the Technical Specifications.

Six surveillance tests did not fully test the required channels as required by Technical Specification section 1.9.3.

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Similar events, surveillance tests that did not meet technical specification requirements, were reported in LERs 93-004, 93-009, 93-023, 93-028, 93-034, 93-40, 93-049 and LER 94-003-00.

SAFETY SIGNIFICANCE

These events did not affect the health and safety of the public. This conclusion was reached based on the following:

- The automatic closure and open permissive logic circuitry for the RHR suction valves was demonstrated to be operable on March 15, 1994. There is reasonable assurance to believe that it would have performed its required function.
- Four surveillance tests were deficient in that they failed to test alarm functions associated with their respective systems. Objective evidence is available to prove that the upper high flux deviation and lower flux deviation alarms were operable. Surveillance test 3PT-V20, successfully performed in June 1989 and July 1992, tests these alarms but does not meet the frequency requirements for monthly testing.
- The inadequate testing of the reactor trip, manual trip and reactor trip breaker open alarms has no safety significance because alternate indications exist in the control room. Indications that would alert the operator of a reactor trip include illumination of the rod bottom lights and the turbine trip annunciator. The failure to test an alarm circuit or the failure of the alarm circuit to function does not affect the ability of the alarm's associated circuit to perform their intended manual or automatic functions.

The extent of condition is being assessed by the Authority in accordance with commitment IPN-93-099-01. This review has resulted to date in the identification of a total of seven surveillance test deficiencies. The first of these deficiencies was reported in LER 94-003-00. I&C has completed their review and has identified six additional deficiencies in this LER. When the Authority's review is complete, the extent of condition will be determined and a supplemental LER will be submitted, if necessary.