

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



**New York Power
Authority**

L. M. Hill
Resident Manager

May 26, 1995
IPN-95-062

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

SUBJECT: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
License No. DPR-64
Licensee Event Report # 95-010-00
"Relay Inoperable Due to Wrong Model Number Placed
the Plant in a Condition Prohibited by Technical Specifications"

Dear Sir:

The attached Licensee Event Report (LER) 95-010-00 is hereby submitted as required by 10CFR50.73. This event is of the type defined in 10CFR50.73(a)(2)(i)(B). There are no new commitments made by NYPA in this LER.

Very truly yours,

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

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

Attachment
cc: See next page

9506020444 950526
PDR ADOCK 05000286
S PDR

JE77

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

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

INPO Records Center
700 Galleria Parkway
Atlanta, Georgia 30339-5957

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
(MNBB 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.

FACILITY NAME (1)

Indian Point Unit 3

DOCKET NUMBER (2)

05000286

PAGE (3)

1 OF 5

TITLE (4) Relay Inoperable Due to Wrong Model Number Placed 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
04	28	95	95	-- 010 --	00	05	26	95	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)		✓ 50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		(Specify in Abstract below and in Text, NRC Form 366A)	
			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

L. Labruzzo, Instrument and Controls Engineer

TELEPHONE NUMBER (Include Area Code)

(914) 736-8356

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

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

On April 28, 1995, with the plant in the hot shutdown condition, an Instrument and Control Supervisor issued Deviation Event Report 95-1033 which identified that the Reactor Protection train "B" test relay for the 33 Steam Generator Lo-Lo Level Auxiliary Boiler Feed Pumps auto start signal had an incorrect contact configuration. Technical Specification 3.5 requires two channels of the relay logic to be operable. The event was discovered while performing a surveillance test. The relay has been inoperable since either April 1992 (when the relay was replaced) or initial plant startup. Previous testing would not have identified the condition. The cause could not be determined but was not required for corrective action. A contributing cause was inadequate retest of the relay maintenance changeout. Corrective actions include the review and revision, as necessary, of surveillance tests, improvement of the work control procedure and improvements to the change control process. There was no significant effect on public health and safety since the auxiliary boiler feedwater pumps could have performed their intended function.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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				95	-- 010 --	00	

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

DESCRIPTION OF EVENT

On April 28, 1995, with the plant in the hot shutdown condition (Reactor Coolant System pressure about 900 psig and temperature about 342 degrees F), an Instrumentation and Control (I&C) Supervisor issued a Deviation Event Report (DER) 95-1033 to identify an incorrect contact configuration in the Reactor Protection (JC) train "B" test relay (RLY) for the 33 Steam Generator (SG) Lo-Lo Level auto start signal to the Auxiliary Boiler Feed (BA) Pumps (P) (ABFPs). During the performance of a portion of test 3PT-M13B, a proper voltage reading was not received. Work request 95-02046-00, used by the I&C Department to troubleshoot the problem, led to the discovery that relay LC-437B-Y-B had an incorrect contact configuration. The installed relay was Westinghouse model BFD-66 which has 6 normally open contacts and 6 normally closed contacts. However, the required relay was model BFD-57 which has 5 normally open contacts and 7 normally closed contacts. When not in the test mode, the as-found contact configuration would have blocked the "B" train 33 SG auto start signal for the Lo-Lo Level condition to the ABFPs. The four "A" train Lo-Lo Level auto start signals for the ABFPs and three of the four "B" train Lo-Lo Level auto start signals for the ABFPs were not affected and remained operable.

I&C assessed the work history of relay LC-437B-Y-B to identify the length of time the relay had been inoperable and to determine the cause. The original plant documentation indicates that the relay required by design was model BFD-57; however, there is no direct evidence to demonstrate that a model BFD-57 was in the circuit at the initial plant startup. In 1985, a field walkdown of relays documented that the installed relay LC-437B-Y-B was model BFD-66. I&C could not determine if the model BFD-66 relay was operable at that time because surveillance tests since initial startup would not have identified the deficiency.

In April 1992, work request (WR) 91-28252 was used to replace the relay in a "like for like" change (i.e., replacement with an identical item). I&C determined, from the work package and interviews with I&C and Central Planning personnel, that Central Planning verified the model number of the relay as model BFD-66 using the Plant Equipment Data Base (PEDB), formerly the Master Equipment List (MEL), and by field walkdown. The work request instructed personnel to replace the existing model BFD-66 relay with an installed spare model BFD-66 relay, already mounted in the cabinet, in the manner that the existing relay was wired. I&C found no concern with the work controls since the means to verify the correct model relay were adequate. However, I&C determined that the post maintenance retest prepared for work

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request 91-28252 was inadequate to detect the inoperable relay. Relay LC-437B-Y-B has three functions (i.e., blocks an auto start of the feedwater pump during testing, de-energizes the reactor trip logic relay when testing, and illuminates a test light), but the retest checked only the illumination of the test light.

I&C concluded that there was insufficient evidence to identify the cause of the model BFD-66 relay being in the circuit or the duration that an inoperable relay was part of the circuit. If the model BFD-66 relay identified in 1985 had been altered to function as a model BFD-57 relay when installed, the relay would have been inoperable since April 1992. Altering the relay like this is relatively straightforward. The event date is therefore the date the event was discovered, April 28, 1995.

I&C took corrective action by replacing the model BFD-66 relay with a model BFD-57 relay.

CAUSE OF THE EVENT

The cause of the event could not be determined, but was not required for corrective action. A contributing cause was personnel error in developing an inadequate post maintenance retest in 1992.

CORRECTIVE ACTION

The following corrective actions have been completed to correct the problem and provide reasonable assurance that there will be no recurrence:

- The relay was replaced with the correct relay.
- Commitment IPN-94-032-01 required NYPA to review and, where deficient, revise surveillance tests required by Technical Specifications to ensure that alarms and trips required for instrument channel functional tests and instrument channel calibrations are properly tested. The incorrect contact configuration was identified during the performance of surveillance test 3PT-M13B which had been revised, as required, by the corrective action.

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- To address NRC Restart Action Plan (RAP), Restart Issues Checklist item III.3, surveillance tests were reviewed for procedure adequacy with regard to the FSAR, Technical Specifications, and commitments to the NRC. Operability criteria in the surveillance tests were revised, when necessary, to ensure the criteria met the intent of the applicable Technical Specification. The restart issue documentation package documents this review and demonstrates that the surveillance program can accomplish its mission by producing objective test information that allows Operations to regularly review and affirm the operability of important plant components.
- To address NRC Restart Action Plan (RAP), Restart Issues Checklist item III.4, the work control process was improved through the revision of the administrative and implementing retest procedures and the establishment of controls for mode changes associated with retests. The restart issue documentation package documents this and demonstrates that the post-maintenance program can accomplish its mission by producing objective test information that allows Operations to review and affirm the operability of replaced or modified plant components.
- During the past several years, the Authority has made many improvements to the plant change process. These changes have included training and improved procedures. The modification and troubleshooting/corrective maintenance processes are now well defined and proper documentation is maintained. There is a sense of heightened awareness, increased attention to detail, and a questioning attitude among station personnel.

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. The "B" train auto start signal for a Lo-Lo 33 steam generator level to ABFPs 31, 32, and 33 was blocked due to an inoperable relay. Technical Specification 3.5, Table 3.5-2, item 14 requires two channels of the reactor protection relay logic, which includes the ABFP auto start logic, be operable or the plant must be maintained in the hot shutdown condition. There was no evidence to conclusively demonstrate the period outside Technical Specifications. That period could be from either July 1992 (i.e., this was when the

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circuit was required to be operable following the replacement of relay LC-437B-Y-B in April 1992) or initial plant operation until February 1993.

Licensee Event Reports (LER) 93-042-00, 93-049-00, and 94-002-00 reported similar events involving inadequate testing.

SAFETY SIGNIFICANCE

This event did not significantly affect the health and safety of the public.

This event did not affect the "A" train of the auto start function and three of the four Lo-Lo Level signals on the "B" train of the auto start function were normally operable (i.e., during periods required by Technical Specification unless an LCO was entered). The "A" train and "B" train auto start signals will initiate operation of the 31 and 33 ABFPs with a Lo-Lo Level signal from any SG (a 1 out of 4 logic). The "B" auto start will initiate the 32 ABFP with a Lo-Lo Level signal from two SGs (a 2 out of 4 logic). Therefore, if required, the ABFPs would have performed their required function.

The "A" train reactor protection relay logic was periodically out of service for testing. During these periods, the "B" train reactor protection relay logic would have provided protection for the health and safety of the public. Even with a single failure of one channel in train "B", the ABFPs would have continued to perform the intended function because 3 of the 4 "B" train auto start signals (i.e., from SG 31, 32, and 34) remained intact and feedwater would be injected to the four steam generators when started.

The AMSAC circuitry, which also initiates operation of the ABFPs, was unavailable during the same time period as discussed in LER 93-005.

The revision to the surveillance procedures made in response to commitment IPN-94-032-01 (LER 94-002) addresses the extent of condition.