



Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
James A. FitzPatrick NPP
P.O. Box 110
Lycoming, NY 13093
Tel 315 349 6024 Fax 315 349 6480

T. A. Sullivan
Vice President, Operations-JAF

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JAFP-01-0103

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop O-P1-17
Washington, D.C. 20555

Subject: **Docket No. 50-333**
LICENSEE EVENT REPORT: LER-01-002 (DER-01-00859)

**Failure To Satisfy Technical Specifications Requirements Due To
Inoperable Support Instrumentation**

Dear Sir:

This report is being submitted in accordance with 10 CFR 50.73(a)(2)(i)(B), "Any operation or condition which was prohibited by the plant's Technical Specifications."

There are no commitments contained in this report.

Questions concerning this report may be addressed to Mr. Gordon Brownell at (315) 349-6360.

Very truly yours,

A handwritten signature in black ink, appearing to read "T. A. Sullivan", is written over a horizontal line.

T. A. Sullivan

TAS:GB:las
Enclosure

cc: USNRC, Region 1
USNRC, Project Directorate
USNRC Resident Inspector
INPO Records Center

IE22

LICENSEE EVENT REPORT (LER)(See reverse for required number of
digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FACILITY NAME (1)

James A. FitzPatrick Nuclear Power Plant

DOCKET NUMBER (2)

05000333

PAGE (3)

1 OF 4

TITLE (4)

Failure To Satisfy Technical Specifications Requirements Due To Inoperable Support Instrumentation

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
02	26	01	01	002	00	04	27	01	N/A	05000
									N/A	05000
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)								
N		20.2201(b)			20.2203(a)(2)(v)			X	50.73(a)(2)(i)	50.73(a)(2)(viii)
POWER LEVEL (10)		20.2203(a)(1)			20.2203(a)(3)(i)				50.73(a)(2)(ii)	50.73(a)(2)(x)
100		20.2203(a)(2)(i)			20.2203(a)(3)(ii)				50.73(a)(2)(iii)	73.71
		20.2203(a)(2)(ii)			20.2203(a)(4)				50.73(a)(2)(iv)	OTHER
		20.2203(a)(2)(iii)			50.36(c)(1)				50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)			50.36(c)(2)				50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)**NAME**

Mr. Gordon Brownell, Licensing Engineer

TELEPHONE NUMBER (Include Area Code)

(315) 349-6360

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)

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

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

On February 26, 2001, with the reactor mode switch in the RUN position, the plant operating at approximately 100 percent rated power, and with the flow unit D of the Power Range Monitoring System in an inoperable condition, it was identified that the appropriate Technical Specifications (T.S.) Actions for the inoperable flow unit had not been entered. Specifically, it was not recognized that the inoperability of the flow unit made the associated Average Power Range Monitor (APRM) Flow Referenced Neutron Flux High Scram Trip Function vulnerable to single failure, and thus necessitated declaring its associated required APRM Flow Referenced Neutron Flux High Scram Trip Function inoperable and entering the appropriate T.S. Action Statement.

The causal factor leading to this event was inadequate training/qualification content.

Immediate corrective actions include communicating the details of this event to the Senior Reactor Operators and reviewing current equipment Limiting Conditions for Operation (LCOs) for potential similar conditions.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)		
James A. FitzPatrick Nuclear Power Plant	05000333	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 4		
		01	002	00			

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

EVENT DESCRIPTION

On February 26, 2001, with the reactor mode switch in the RUN position, the plant operating at approximately 100 percent rated power, and with flow unit D of the Power Range Monitoring System [IG] in an inoperable condition, it was identified that the appropriate Technical Specifications (T.S.) Actions for the inoperable flow unit had not been entered. Specifically, it was not recognized that the inoperability of the flow unit made the associated Average Power Range Monitor (APRM) Flow Referenced Neutron Flux High Scram Trip Function channels vulnerable to single failure, and thus necessitated declaring its associated required APRM Flow Referenced Neutron Flux High Scram Trip Function inoperable and entering the appropriate T.S. Action Statement.

The flow unit subsystem of the Power Range Monitoring System is comprised of four flow channels. Flow units A and C receive inputs from loops A and B of the Reactor Water Recirculation (RWR) System's [AD] driving flow transmitters and generate flow signals which are used as reference voltages in the Rod Block Monitoring (RBM) System (channel A) and APRM System (channels A, C and E). Flow units B and D receive inputs from loops A and B of the RWR System's driving flow transmitters and provide flow signals which are used as reference voltages in the RBM System (channel B) and the APRM System (channels B, D and F).

On February 04, 2001, operators declared flow unit D inoperable, however, an "active" Limiting Conditions for Operation (LCO) Action Statement was not entered. It was not recognized that operability of both the B and D flow units is necessary to meet single failure criteria for the scram function of the Reactor Protection System (RPS).

On February 26, 2001, at 1230 hours, with flow unit D still inoperable, the Shift Manager recognized the effects of the flow unit failure on the APRM Flow Referenced Neutron Flux High Scram Trip Function operability. APRM Flow Referenced Neutron Flux High Scram Trip Function channels B, D and F and Rod Block Monitor B were declared inoperable and entry into required actions from T.S. Table 3.1-1, Reactor Protection System (Scram) Instrumentation, and T.S. Table 3.2-3, Control Rod Block Instrumentation requirements were completed.

On February 26, 2001, at 2020 hours, flow unit D was returned to an operable condition and the associated APRM and RBM channels were restored to an operable status.

CAUSE OF EVENT

When reviewing the required T.S. Actions to be taken when placing the flow unit in the bypass position, the operations shift failed to recognize the effects of removing this flow unit from service on the operability of the associated APRM Flow Referenced Neutron Flux High Scram Trip Function (the flow unit is a supporting instrument for the APRMs that is not specifically addressed in the T.S. or T.S. Bases).

The causal factor leading to this event was inadequate training/qualification content. Operators had not been made aware that in order to obtain the proper (most conservative) reference signal under single failure conditions, both flow units per trip system were required to be operable.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)	
James A. FitzPatrick Nuclear Power Plant	05000333	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3	OF 4
		01	002	00		

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

CAUSE OF EVENT (cont'd.)

Reviews have determined that the requirement of declaring an APRM Flow Referenced Neutron Flux High Scram Trip Function channel inoperable when taking an associated flow unit to an inoperable status had not previously been recognized by either of the Operations or the Training Departments. Neither completed operability determinations nor Engineering evaluations in support of operability determinations identified this error.

EVENT ANALYSIS

This report is being submitted in accordance with 10 CFR 50.73(a)(2)(i)(B), "Any operation or condition which was prohibited by the plant's Technical Specifications..."

Flow units B and D both provide input to APRM Flow Referenced Neutron Flux High Scram Trip Function channels B, D and F as well as RBM channel B. Each of the Neutron Flux instruments has a flow signal input auctioneering circuit that selects the lowest (conservative) flow signal for comparison with power in the flow biased trip outputs (scram and rod block). The thermal hydraulic design of the core in conjunction with the APRM flow referenced trip provide protection for the Minimum Critical Power Ratio (MCPR) safety limit from the effects of thermal-hydraulic instability. If only one of the two flow units associated with APRM channels B, D and F is operable, any single non-conservative failure of the remaining operable flow unit results in the trip outputs of the associated APRM Flow Referenced Neutron Flux High Scram Trip Function being non-conservative. To limit the time that this "vulnerability to single failure" is allowed, one of the associated required APRM Flow Referenced Neutron Flux High Scram Trip Functions is declared inoperable and the associated T.S. Required Action is entered. The T.S. Required Action requires the APRM Flow Referenced Neutron Flux High Scram Trip Function to be restored to an operable status within twelve hours or placed in "trip".

The safety significance of this event is minor. Although the APRM Flow Referenced Neutron Flux High Scram Trip Function is required by the T.S., and is identified in the Core Operating Limits Report (COLR), no credit is taken for the Function in the plant's design basis accidents or operational transient analyses. However, the function is intended to provide protection against transients where thermal power increases slowly, and provides protection for thermal hydraulic events.

EXTENT OF CONDITION

Previous LCO Action Statements have been entered where the impact of removing flow units from service has not been recognized, and resulted in the failure to declare an associated required APRM Flow Referenced Neutron Flux High Scram Trip Function channel inoperable. The enhanced Bases provided as part of implementation of Improved Technical Specifications (ITS) will improve the understanding of support and supported equipment relationships and appropriate actions to be taken. A review of Technical Specifications identified no other similar LCO action statements.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)	
James A. FitzPatrick Nuclear Power Plant	05000333	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 4	
		01	002	00		

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

CORRECTIVE ACTIONS

1. The Operations Manager has communicated the details of this event and lessons learned to the Senior Reactor Operators.
2. Engineering personnel qualified to perform Engineering evaluations in support of operability determinations will be briefed on the cause and lessons learned from this event.
(Scheduled Completion Date – May 9, 2001)
3. The licensed operator initial training and continuing training materials, and Engineering Support Personnel (ESP) continuing training materials will be updated, using the Systematic Approach to Training process.
(Scheduled Completion Date – July 31, 2001)

ADDITIONAL INFORMATION

- A. Previous Similar Events: NONE
- B. Failed Components: NONE
- C. Applicability to NEI 99-02, Rev. 0, "Regulatory Assessment Performance Indicator Guideline."

The above described event does not constitute a Safety System Functional Failure as defined in NEI 99-02, Revision 0.