

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Catawba Nuclear Station, Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 4 1 3 1 OF 0 3										PAGE (3) 1 OF 0 3	
TITLE (4) Power Range Channel Inoperable During the Mode Change																					
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 1	1 7	8 5	8 5	0 0 5	0 0 0	2 1	5 8	5						0 5 0 0 0							
OPERATING MODE (9) 2			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)																		
POWER LEVEL (10) 0 1 0 1 0			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 (Specify in Abstract below and in Text, NRC Form 365A)						
			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)(ix)										
LICENSEE CONTACT FOR THIS LER (12)												TELEPHONE NUMBER									
NAME Roger W. Ouellette, Assistant Engineer - Licensing												AREA CODE 7 1 0 1 4 3 1 7 1 3 1 - 1 7 1 5 1 3 1 0									
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																					
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC											
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)

Between January 7, 1985, and January 20, 1985, Catawba Unit 1 entered Mode 2 five times while Technical Specification 3.0.4 was in effect. Technical Specification 3.0.4 states that an "OPERATIONAL MODE" cannot be entered unless the applicable Limiting Conditions for Operation are met without being in the associated ACTION requirements. This Technical Specification non-compliance, associated with "Power Range Neutron Flux, NOT P-10", was discovered on January 17, 1985, during a review of the Technical Specification Action Item Log (TSAIL). Unit 1 was in Mode 2, Startup, at the time of the discovery.

This incident is classified as a Personnel Error. When a Power Range Channel was removed from service, the TSAIL was not filled out properly in relation to the "NOT P-10" requirement. The associated personnel were not aware of this item, which requires all four channels of the Power Range Instrumentation to be operable in Mode 2.

This incident is reportable pursuant to 10 CFR 50.73, Section (a)(2)(i)(B).

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Catawba Nuclear Station, Unit 1	0 5 0 0 0 4 1 3 8 5 -	0 0 5 -	0 0 0	2	OF	0 3	

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

Technical Specification 3/4.3.1, Table 3.3-1 concerns the operability of the Reactor Trip System Instrumentation. Items 2, 3, 4, 18.c, d, e, and f apply to the Power Range Nuclear Instrumentation. Item 18.f of the table applies to the Power Range Channels during Modes 1 and 2, but below the 10% power level (NOT P-10 condition). The P-10 signal is used to block or enable the Nuclear Instrumentation Trip Logic. 3 out of 4 channels in the "NOT P-10" condition enable the trip logic, while 2 out of 4 channels in the P-10 condition allow the Operator to block the trip logic. Since 3 out of 4 channels are needed to enable the trip logic, all four channels are required in the "NOT P-10" condition. With less than four channels operable, the P-10 interlock must be verified to be in its required state for that existing plant condition within 1 hour.

Item 18.e of Table 3.3-1 applies to the Power Range Channels with the reactor above 10% power (P-10 condition). In this condition, only 3 channels are required to be operable since 2 out of 4 channels allow the Operator to block the trip logic.

Technical Specification 3.0.4 states that an "OPERATIONAL MODE" cannot be entered unless the Limiting Conditions for Operations are met without relying on the associated Action Statement. As Technical Specification 3.0.4 applies to 18.f, the unit cannot enter Modes 1 or 2 if the plant is in the Action Statement.

The Final Draft of Catawba Unit 1 Technical Specifications was issued on May 25, 1984. On June 13, 1984, a meeting was held between Duke Power, and the Reactor Systems Branch and the Instrumentation and Controls System Branch of the NRC. ON June 20, 1984, Duke Power Company received comments from the NRC as a result of the meeting. The Unit 1 Fuel Load License was received on July 18, 1984. Item 18.f concerning the "NOT P-10" requirement was added to Technical Specifications between June 10th and July 18th, via a Duke Power letter dated June 29, 1984.

Power Range Channel N-44 was removed from service on December 5, 1984, at 1700 hours. On January 2, 1985, Procedure TP/1/A/2100/02 (Zero Power Physics Testing Controlling Procedure) was begun. The signal from inoperable detector N-44 was routed to test equipment for monitoring reactivity. N-44 was returned to service on January 8, 1985, at 1230 hours. While N-44 was declared inoperable, Unit 1 entered Mode 2 on two occasions, which is prohibited Technical Specification 3.0.4. All four Power Range Channels are required to be operable in Mode 2.

Power Range Channel N-42 was removed from service on January 8th, at 1245 hours, and connected to the test equipment. This channel was not returned to service until January 18th, at 2320 hours. While N-42 was inoperable, Unit 1 entered Mode 2 on three different occasions.

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This incident is classified as a Personnel Error. Two entries were made to the Technical Specification Action Item Log (TSAIL) to comply with the requirements of Items 2, 3 and 4 of Table 3.3-1. One entry was made for N-44 on December 5, 1984. The other entry was made for N-42 on January 8, 1985. Items 2, 3, and 4 of Table 3.3-1 require 3 Power Range Channels to be operable in Modes 1 or 2. Also, Technical Specification 3.0.4 does not apply to these items. The personnel responsible for making the TSAIL entries were not aware of Item 18.f, which requires all 4 channels to be operable.

A contributing cause is a result of the Technical Specification review. The Technical Specification change, which added the "NOT P-10" requirement, was not identified. The station Compliance group is responsible for comparing the Technical Specifications to identify changes and transmit these changes per Station Directive 2.1.7. During a review to identify changes to the Final Draft of the Technical Specifications, this item was overlooked, and therefore, not identified as a change.

CORRECTIVE ACTION

An Operator Update was issued to ensure that all licensed personnel are aware of the "NOT P-10" Technical Specification requirement. Changes were made to Instrumentation Procedures IP/1/A/3240/04C (Excore Nuclear Instrumentation System (ENB) Power Range Channel Calibration), IP/0/A/3240/11 (Excore Nuclear Instrumentation System Calibration at Power), and IP/0/A/3240/12 (Excore Nuclear Instrumentation System (ENB) Removing Channels from Service). Steps were added to notify the Control Room Operator and the Senior Reactor Operator that an Action Statement will be entered if a channel is removed from service while in Modes 1 or 2 below 10% power. A Technical Specification change will be pursued so that Technical Specification 3.0.4 will not apply to Item 18.f. This will allow the unit to enter Mode 2 while in the Action Statement.

SAFETY ANALYSIS

During Zero Power Physics Testing, the Power Range High Setpoint Trip Logic was set to trip at approximately 20% Indicated Power. With one Power Range Channel inoperable, any one of the remaining three channels exceeding the setpoint would have generated a reactor trip. Also, the Intermediate Range Trip Logic was operable and set to trip at approximately 25% of Indicated Power.

The health and the safety of the public were not affected by this incident.

**DUKE POWER COMPANY**

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HAL B. TUCKER  
VICE PRESIDENT  
NUCLEAR PRODUCTION

February 15, 1985

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

Subject: Catawba Nuclear Station, Unit 1  
Docket No. 50-413

Gentlemen:

Pursuant to 10 CFR 50.73 Section (a) (1) and (d), attached is Licensee Event Report 413/85-05 concerning a power range channel being inoperable during mode change. This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

*H. B. Tucker*

Hal B. Tucker

RWO:slb

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator  
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