

LICENSEE EVENT REPORT

EXHIBIT A

CONTROL BLOCK: |\_\_|\_\_|\_\_|\_\_|\_\_|\_\_|1

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

<u>7</u>	<u>0</u>	<u>1</u>	<u>8</u>	<u>9</u>	A	R	A	N	O	<u>12</u>	<u>14</u>	<u>15</u>	<u>0</u>	<u>0</u>	-	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>3</u>	<u>26</u>	<u>4</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>4</u>	<u>57</u>	<u>1</u>	<u>15</u>	
				LICENSEE CODE								LICENSE NUMBER												LICENSE TYPE								CAT			
<u>7</u>	<u>0</u>	<u>1</u>	<u>8</u>	REPORT SOURCE				<u>16</u>	<u>60</u>	<u>61</u>	<u>0</u>	<u>5</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3</u>	<u>6</u>	<u>8</u>	<u>17</u>	<u>69</u>	<u>0</u>	<u>6</u>	<u>1</u>	<u>5</u>	<u>8</u>	<u>3</u>	<u>18</u>	<u>75</u>	<u>0</u>	<u>6</u>	<u>2</u>	<u>8</u>	<u>8</u>	<u>3</u>	<u>19</u>
								DOCKET NUMBER								EVENT DATE				REPORT DATE															

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10

On 6/15/83, while in Mode 1 at 100% full power, it was discovered that since 5/17/83, the DNBR Power Operating Limit (POL) penalty installed in the core operating limit supervisory system (COLSS) was not adequate to compensate for the response time of cold leg resistance temperature detector (RTD) T4611-4. The installed penalty was adequate for a response time of <8.0 seconds, however, the response time for RTD T4611-4 had degraded to 18.1 seconds. This occurrence has been determined to be reportable per Technical Specification (T.S.) 6.9.1.8.b.1. The deficiency affected one channel. T.S. 6.9.1.8.b applies in that the limiting conditions of operation (LCO) requirements in T.S. 3.3.1.1 were exceeded with respect to channel bypass requirements and related corrective

SYSTEM CODE		CAUSE CODE		CAUSE SUBCODE		COMPONENT CODE				COMP SUBCODE		VALVE SUBCODE		REVISION NO			
10 9 8		11 10		12 11		13 12 11 10 9 8				15 14 13 12 11 10		16 15 14 13 12 11		17 16 15 14 13 12			
17	LER/RO REPORT NUMBER	EVENT YEAR		---		SEQUENTIAL REPORT NO.				OCCURRENCE CODE				REPORT TYPE		REVISION NO	
	18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1		23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1		24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1				28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1				30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1		32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	
ACTION TAKEN		FUTURE ACTION		EFFECT ON PLANT		SHUTDOWN METHOD		HOURS		ATTACHMENT SUBMITTED		NPRD-4 FORM SUB		PRIME COMP. SUPPLIER		COMPONENT MANUFACTURER	
18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1		19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1		20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1		21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1		22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1		23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1		24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1		25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1		26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS 27

CAUSE DESCRIPTION / CORRECTIVE ACTIONS 27

1 0 | The cause of the RTD response time degradation is believed to be degradation of the couplant (Never-Seez) used

1 1 | in mating the RTD's into the thermowells. When the response time data became available on 5/17/83, it was not

1 2 | recognized that a COLSS DNBR POL penalty was required in addition to the required CPC penalties. This was a

1 3 | result of a lack of a formal procedure for RTD response time data evaluation. A procedure was in development

1 4 | at the time of the occurrence, but had not been formally implemented. A RTD response time data evaluation

FACILITY STATUS		% POWER		OTHER STATUS		METHOD OF DISCOVERY		DISCOVERY DESCRIPTION	
1	5	1	128	1	NA	130	B	131	Routine Surveillance
7	8	9	10	12	13	44	45	46	132

ACTIVITY RELEASED		CONTENT OF RELEASE		AMOUNT OF ACTIVITY		LOCATION OF RELEASE	
1	6	2	34	NA	35	NA	36
7	8	9	10	11	44	45	80

PERSONNEL EXPOSURES										44	45	80
NUMBER		TYPE		DESCRIPTION								
1	7	1	0	0	0	37	2	38	NA			
8		9				11	12					139
PERSONNEL INJURIES												80

PERSONNEL INJURIES										80
NUMBER				DESCRIPTION						
1	8	0	0	0	40	NA				141
9	11	12								80

LOSS OF OR DAMAGE TO FACILITY	
TYPE	DESCRIPTION
1 9	1 Z 42 1 NA

	PUBLICITY	8307120191	830628	
	ISSUED DESCRIPTION	PDR ADOCK	05000368	
	S	PDR		
	NRC USE ONLY			

NAME OF PREPARER Patrick C. Rogers

PHONE: (501) 964-3100

LICENSEE EVENT REPORT

EXHIBIT A

LER No. 50-368/83-025/01T-0

Occurrence Date: 6/15/83

Event Description and Probable Consequences (Continued)

time frames as specified in the action statements. Minimum redundancy provisions were not maintained when other channels were removed from service for maintenance or testing. A review of compensating penalty application as a function of RTD response time testing history revealed that a similar error has occurred and gone unnoticed resulting in a nonconservative penalty being applied during the period of 11/13/82 through 11/21/82. LER's 81-017, 82-001, 83-009 and 83-014 reported previous occurrences related to RTD response time degradation.

Cause Description and Corrective Actions (Continued)

procedure has been implemented at the time of this report and contains provisions for independent verification of the applied penalties. An adequate penalty factor was installed in COLSS within one hour of discovery as required by T.S. 3.3.1.1. CPC penalty factors installed at the time of the RTD response time measurement were in compliance with T.S. 3.3.1.1. Additional penalties were installed in CPC Channel "A" as a precaution to compensate for possible further degradation of RTD response time. Penalties have been installed corresponding to 13 seconds for CPC Channel "A", 8 seconds for CPC Channels "B", "C" and "D", and 10 seconds for COLSS. An investigation into the RTD response time degradation is continuing. With regard to the 11/13/82 event, the time constant for RTD number 4611-4 was determined to be 8.14 seconds, which required that a 5.0% penalty be applied to the COLSS required overpower margin. Instead, a 4% penalty was applied during the period of 11/13/82 through 11/21/82. The RTD was refurbished, and subsequent to 11/21/82, the appropriate penalty was again 4%. Low power physics testing was in progress during this period and the overpower margin was maintained. The degraded couplant is "Never-Seez" brand which was recommended by Combustion Engineering to improve heat transfer between the thermowell and the RTD. The RTD's are manufactured by Rosemount.



ARKANSAS POWER & LIGHT COMPANY  
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June 28, 1983



2CAN068311

Mr. W. C. Seidle, Chief  
Reactor Project Branch #2  
U. S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 1000  
Arlington, Texas 76011

Subject: Arkansas Nuclear One - Unit 2  
Docket No. 50-368  
License No. NPF-6  
Licensee Event Report  
No. 83-025/01T-0

Gentlemen:

In accordance with Arkansas Nuclear One - Unit 2 Technical Specification 6.9.1.8.b, attached is the subject report concerning reactor coolant system resistance temperature detector response time degradation.

Very truly yours,

John R. Marshall  
Manager, Licensing

JRM:RJS:s1

Attachment

cc: Mr. Richard C. DeYoung  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Mr. Norman M. Haller, Director  
Office of Management & Program Analysis  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555