

LICENSEE EVENT REPORT

EXHIBIT A

L I C E N S E E E V E N T R E P O R T (L E R)

FACILITY NAME (1) Arkansas Nuclear One, Unit Two DOCKET NUMBER (2) PAGE (3)
0151010101 31 61 8110F1012

TITLE (4) CPC Channel D RTD Calibration and Response Time Degradation

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)											
01	71	21	78	4	81	4	--	0	12	5	--	0	0	01	91	11	01	81	4		0151010101

OPERATING MODE (9) 1 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5:
(10) 11010 (Check one or more of the following) (11)

POWER LEVEL (10)	11010	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.36(c)(2)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<input type="checkbox"/> 50.73(a)(2)(x)	<input type="checkbox"/> 73.71(b)	<input type="checkbox"/> 73.71(c)	<input type="checkbox"/> Other (Specify in Abstract below and in Text, NRC Form 366A)
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Name LICENSEE CONTACT FOR THIS LER (12) Patrick C. Rogers, Plant Licensing Engineer
Telephone Number 51011916141-1311010
Area Code 51011916141-1311010

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
X	I	M	T	E	W	1	10	18	Y

SUPPLEMENT REPORT EXPECTED (14) Yes (If yes, complete Expected Submission Date) No
EXPECTED SUBMISSION DATE (15) _____

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

On 8/9/84, while in Mode 1 at 100% full power (FP), it was discovered that incorrect data was used to calibrate resistance temperature detector (RTD) 2TE-4711-4 which provides cold leg temperature input to Channel D Core Protection Calculator (CPC). During an outage that began on 7/20/84, 2TE-4711-4 was replaced to provide improved response time. The replacement RTD had been previously returned to the manufacturer for modification of the lead wires. The manufacturer chose to replace the RTD rather than modify the existing element, but the same serial number was re-used. When the RTD was installed, data for the original RTD was used for calibration. Also at this time response time testing was performed. Test results received on 7/27/84 indicated an acceptable response time of 5.28 sec. On 8/9/84 the calibration error was discovered and 2TE-4711-4 was re-calibrated using the correct constants. Subsequent response time testing results received on 8/28/84 indicated that the response time had degraded to 12.76 sec. Each problem could have resulted in non-conservative, larger than allowable uncertainty in CPC Channel D calculations. A couplant compound was used in the thermowell for 2TE-4711-4 and acceptable RTD response times were achieved.

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EXHIBIT A

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		Year	Sequential Number	Revision Number	
Arkansas Nuclear One, Unit Two	0151010101 31 61 81	84	025	00	101210F1012

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

On 8/9/84, while in Mode 1 at 100% FP, it was discovered that incorrect data was used to calibrate temperature element 2TE-4711-4. This element provides cold leg temperature input to Channel D Core Protection Calculation (CPC).

During an outage that began on 7/20/84 (reference LER-84-019), 2TE-4711-4 was replaced to provide improved response time. The resistance temperature detector (RTD) element used for replacement had been previously returned to the manufacturer (Weed Instrument Co., Inc.) for modification of the lead wires. While at the manufacturer, the RTD was replaced due to difficulty encountered in repair, but the same serial number was re-used. Later, when the RTD element was installed for 2TE-4711-4, re-calibration was based on the original calibration constants for that element since the technicians did not realize that a change had been made. RTD response time testing was also performed on 7/26/84 and 7/27/84 following the outage startup. Results of the response time testing received on 7/27/84 indicated that the RTD had an acceptable response time of 5.28 seconds. Calibration checks were initiated on this temperature element due to an unrelated problem that led to the discovery on 8/9/84 that incorrect calibration data had been used to calibrate 2TE-4711-4. The correct data was obtained and 2TE-4711-4 was recalibrated on 8/9/84. Subsequent response time testing was conducted on 8/23/84 and 8/24/84. The results received on 8/28/84 indicated that the response time of 2TE-4711-4 had degraded to 12.76 seconds which exceeded the RTD response time allowance. 2TE-4711-4 was removed and a couplant compound (Never-Seez) installed in the thermowell. Weed RTDs are designed such that no couplant should normally be required, however, element and thermowell fitup appears to be less than adequate for this element. 2TE-4711-4 was re-installed and response time testing was performed on 9/3/84 and an acceptable response time was obtained.

The miscalibration of 2TE-4711-4 and the increased response time could have led to non-conservative calculations, alarming and/or trip of CPC Channel D for an asymmetric steam generator transient had such an event occurred. CPC Channels A, B and C were operable at all times during this occurrence. RTD 2TE-4711-4 is a dual element model SP6120-1B-C-6-18-0-0 manufactured by Weed Instrument Co. Inc. EIIS identifier is 02JC-TE-4711-4. Weed Instrument Co. has been contacted by AP&L QA Dept. regarding the re-use of serial numbers and has been required to provide corrective measures in order to remain a qualified vendor. Similar occurrences were reported in LER's 81-017, 82-001, 83-009, 83-014, 83-025 and 84-009.



ARKANSAS POWER & LIGHT COMPANY

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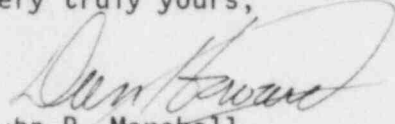
U. S. Nuclear Regulatory Commission
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Subject: Arkansas Nuclear One - Unit 2
Docket No. 50-368
License No. NPF-6
Licensee Event Report
No. 84-025-00

Gentlemen:

In accordance with 10CFR50.73(a)(2)(i), attached is the subject report concerning the discovery that incorrect data was used to calibrate resistance temperature detector (RTD) 2TE-4711-4.

Very truly yours,


John R. Marshall
Manager, Licensing

JRM:RJS:ac

Attachment

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

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