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ComEd

April 5, 1996

JSPLTR: 96-0055

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

Enclosed is Licensee Event Report 96-005, Docket 50-237, which is being submitted pursuant to 10CFR50.73(a)(2)(i)(b) which requires the reporting of any condition prohibited by the Technical Specifications.

This correspondence includes the following commitments:

1. The instrument loop calculation, which includes Unit 2 and Unit 3, will be revised to reflect the increased surveillance frequency. (2371809600501)

2. A design change will be completed on both Unit 2 and Unit 3 to either add test tap valves or replace the pressure switches with improved equipment. The pressure switch calibration surveillance frequency will be changed for Unit 2 and Unit 3. (2371809600502)

Sincerely,

J. Stephen Perry
Vice President
BWR Operations

Enclosure

cc: H. Miller, Regional Administrator, Region III
NRC Resident Inspector's Office

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NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

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.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Dresden Nuclear Power Station, Unit 2	05000237	1 OF 5

TITLE (4)
Electromatic Relief Valve 2-0203-3A,B,D and E Pressure Switches Found Outside of Technical Specification Tolerance Due to Setpoint Drift

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
03	09	96	96	-- 005 --	00	04	05	96	None	
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	N
POWER LEVEL (10)	000

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.2201(b)		20.2203(a)(3)(i)		50.73(a)(2)(iii)		73.71(b)
	20.2203(a)(1)		20.2203(a)(3)(ii)		50.73(a)(2)(iv)		73.71(c)
	20.2203(a)(2)(i)		20.2203(a)(4)		50.73(a)(2)(v)		OTHER
	20.2203(a)(2)(ii)		50.36(c)(1)		50.73(a)(2)(vii)		(Specify in Abstract below and in Text, NRC Form 366A)
	20.2203(a)(2)(iii)		50.36(c)(2)		50.73(a)(2)(viii)(A)		
	20.2203(a)(2)(iv)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(B)		
	20.2203(a)(2)(v)		50.73(a)(2)(ii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Craig Lowetz Ext. 2694	(815) 942-2920

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	SB	63	B070	Y						

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 15 single-spaced typewritten lines) (16)

On March 9, 1996, at 1330 with Unit 2 in the Shutdown mode for a refueling outage, while performing Dresden Instrument Surveillance (DIS) 0250-03, "Electromatic Relief Valve/Target Rock Valve Pressure Switches Calibration," the pressure switch setpoints for ERV 2-0203-3A,B,D, and E were identified with setpoints below the Technical Specification ERV Actuation Setpoint/Tolerance of ± 1% of the setpoint value. The cause was attributed to setpoint drift. The drift resulted from an extended refueling outage that increased the time between calibration surveillances. The Technical Specification requirement of calibration each refueling outage was met. Each of the pressure switches was then recalibrated satisfactorily in accordance with DIS 0250-03. The safety significance of this event is minimal since the "As Found" setpoint is in the conservative direction. Reactor pressure safety limits would not have been exceeded during any design basis event. Corrective Actions included reviewing the Unit 3 pressure switch performance, changing the calibration surveillance frequency and recalibration of the Unit 2 switches.

EVENT IDENTIFICATION:

Electromatic Relief Valve 2-0203-3A,B,D and E Pressure Switches Found Outside of Technical Specification Tolerance Due to Setpoint Drift

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: 2 Event Date: March 9, 1996 Event Time: 1330 Hours

Reactor Mode: N Mode Name: Shutdown Power Level: 0%

Reactor Coolant System Pressure: 0 psig

B. DESCRIPTION OF EVENT:

This event is being reported as required by 10CFR50.73(a)(2)(i)(b) which requires the reporting of any condition prohibited by the Technical Specifications.

On March 9, 1996 at 1330 with Unit 2 in the Shutdown mode for a refueling outage, while performing Dresden Instrument Surveillance (DIS) 0250-03, Electromatic Relief Valve/Target Rock Valve Pressure Switches Calibration, the pressure switch setpoints for ERV 2-0203-3A,B,D and E were identified with setpoints below Technical Specification 4.6.e ERV Actuation Setpoint\Tolerance of ± 1% of the setpoint value.

The "As Found" setpoint of all pressure switches follows:

RELIEF VALVE	SETPOINT*	±1% TOLERANCE*	"AS FOUND"	"AS LEFT"
ERV 2-0203-3A	1134 PSIG	1123-1145 PSIG	1120 PSIG	1138 PSIG
ERV 2-0203-3B	1111 PSIG	1100-1122 PSIG	1096 PSIG	1113 PSIG
ERV 2-0203-3C	1111 PSIG	1100-1122 PSIG	1113 PSIG	1114 PSIG
ERV 2-0203-3D	1134 PSIG	1123-1145 PSIG	1120 PSIG	1136 PSIG
ERV 2-0203-3E	1134 PSIG	1123-1145 PSIG	1118 PSIG	1138 PSIG

* Technical Specification values plus 10 psig head correction

The Target Rock relief valve (2-0203-3A) has the ability to function as a safety valve as well as a relief valve. The ERVs are electrically actuated pressure relief devices. The pressure switches consist of a bourdon tube type pressure sensing element which actuates a snap-action dual control limit switch, which in turn energizes a heavy duty relay to switch the solenoid load. The pressure switch, in conjunction with the control switch and the Automatic Depressurization System (ADS) [SB] logic contacts, supplies 125V DC electrical power to the solenoid assembly in order to operate the pilot valve. The pilot valve in turn controls the opening and closing of the relief valve.

The pressure switches for ERV 2-0203-3A,B,D, and E were then calibrated satisfactorily in accordance with DIS 0250-03. DIS 0250-03 instructs the Instrument Maintenance Department personnel to isolate the pressure controller being tested and then obtain the "As Found" trip and reset setpoints. This revealed the out of tolerance trip settings. The procedure then states to recalibrate the pressure switches and repeat the "As Found" trip test to obtain the "As Left" trip and reset setpoints.

B. DESCRIPTION OF EVENT: (Cont.)

Two weeks after the discovery of the out of tolerance condition, DIS 0250-03 was performed again and all five of the pressure switches were within the Technical Specification limits. Engineering identified that pressure switch 2-0203-3A drifted more than the others and was subsequently replaced under work request 960031495.

The Unit 3 ERV pressure switches were reviewed for applicability of the out of tolerances found on Unit 2. The Unit 3 switches were last calibrated twenty months ago. The time period between calibrations for the Unit 2 pressure switches described in this report was 34 months. A preliminary review of the Unit 3 surveillance data for 1990, 1992 and 1994 does not show significant levels of instrument drift. On Unit 3, there has been only one instrument found outside the Technical Specification limits since 1990 and this instrument showed good stability on the subsequent two surveillances. Because of this, there is a high probability of finding the instruments in tolerance when next surveilled. Thus, there is no concern with the operability of the Unit 3 pressure switches.

The instrument loop calculation, which includes Unit 2 and Unit 3, will be revised to change the surveillance frequency. A surveillance frequency will be calculated to correspond with the pressure switch performance. The surveillance frequency change will decrease the probability of instrument drift causing the valves to exceed Technical Specification limits.

At the time of the event, no systems or components were inoperable which could have contributed to the event. In addition, no manual or automatic engineered safety feature (ESF) [JE] actuation occurred as a result of this event.

C. CAUSE OF EVENT:

The root cause of the pressure switches, ERV 2-0203-3A,B,D, and E out of tolerance was attributed to setpoint drift. The magnitude of the drift resulted from an extended refueling outage that increased the time between calibration surveillances. Technical Specifications require the calibration each refueling outage. Normally, the surveillance frequency of "Refuel" checks the instrument at approximately 18 month intervals. The time between surveillances in this instance was 34 months. The setpoint is a mechanical type adjustment with spring tensioned screws. Time, in conjunction with pressure switch vibration, can lead to the setpoint drift described in this report.

D. SAFETY ANALYSIS:

Technical Specification 4.6.e states that all ERVs shall have the pressure switch setpoint checked each refueling outage. The Technical Specification allowable setpoint error for each pressure switch is ± 1%. The safety significance of this event is minimal since the additional time between calibrations resulted from an extended refueling outage and the "As Found" setpoint was in the conservative direction. Reactor pressure safety limits would not have been exceeded during any design basis event.

D. SAFETY ANALYSIS: (Cont.)

The ERVs are the functioning components of the ADS. ADS is a backup for the High Pressure Coolant Injection (HPCI) [BJ] system for depressurization of the reactor pressure vessel during a postulated design basis loss of coolant accident involving small area breaks within primary system piping. Automatic actuation of the ADS requires coincident occurrence of reactor water low-low level and drywell high pressure signals sustained for a period of two minutes. This time delay circuit is provided in order to allow for automatic initiation of the HPCI system. If the HPCI system failed to restore reactor inventory above the low-low reactor water level setpoint within the two minute time delay period, automatic initiation of ADS would open the ERVs and depressurize the reactor to provide for automatic injection of the Low Pressure Coolant Injection (LPCI) [BD] and Core Spray [BM] systems in order to restore reactor inventory. The ERV pressure setpoint discrepancies would have had no affect on proper operation of the ADS function. For these reasons the safety significance of this event can be considered minimal.

E. CORRECTIVE ACTIONS:

Recalibrated ERV 2-0203-3A, B, D and E to within their Technical Specification limits in accordance with DIS 0250-03.

A design change will be completed on both Unit 2 and Unit 3 to either add test tap valves or replace the pressure switches with improved equipment. The pressure switch calibration surveillance frequency will be changed for Unit 2 and Unit 3. (2371809600502)

Pressure switch 2-0203-3A was replaced prior to start-up from refueling outage D2R14 under work request 960031495.

The instrument loop calculation, which includes Unit 2 and Unit 3, will be revised to reflect the increased surveillance frequency. (2371809600501)

F. PREVIOUS OCCURRENCES:

LER 89-007/Docket 50-237, Unsatisfactory Main Steam Relief Valve Pressure Setpoints Due To Instrument Drift and Limit Switch Failure.

> Corrective actions included recalibration of 2-0203-3A, E. The faulty limit switch on 2-0203-3C was corrected by replacement of the pressure switch.

LER 90-019/ Docket 50-237, Electromatic Relief Valve Pressure Switch Outside Technical Specification Due to Instrument Setpoint Drift.

> Corrective actions included replacing the Bourdon Tube that had an abnormally wide pressure rating and checked others for wide pressure rating. No other abnormal bourdon tubes were found.

G. COMPONENT FAILURE DATA:

Manufacturer	Nomenclature	Model Number
Barksdale Controls	PRESSURE SWITCH	B2S-H12, B2T-M12

An industry wide NPRDS data base search was performed on Barksdale Control Division Models B2T-M12, B2T-H12, B2S-M12 and B2S-H12 pressure switches. A total of 84 events were identified, of which 73 events were associated with instrument setpoint drift. A majority of the 73 events were reported from a single station. Five of these events were reported for Dresden Station, although not on the Electromatic Relief Valve pressure switches.