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SCHOMMER,K.J. Wisconsin Public Service Corp.
SCHROCK,C.A. Wisconsin Public Service Corp.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 93-005-00:on 930308,pressurizer pressure transmitters found out of tolerence w/plant in cold shutdown as result of instrument drift.Procedure will be developed to measure pressurizer pressure transmitter loop currents.W/930421 ltr.

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April 21, 1993

10 CFR 50.73

U. S. Nuclear Regulatory Commission
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Ladies/Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Reportable Occurrence 93-005-00

In accordance with the requirements of 10 CFR 50.73, "Licensee Event Report System," the attached Licensee Event Report for reportable occurrence 93-005-00 is being submitted.

Sincerely,

C.A. Schrock

C.A. Schrock
Manager-Nuclear Engineering

KJS/cjt

Attach.

cc - INPO Records Center
US NRC Senior Resident Inspector
US NRC, Region III

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Kewaunee Nuclear Power Plant	0 5 0 0 0 3 0 5	1 OF 0 5

TITLE (4) Annual Transmitter Calibration Finds a Shift in the Pressurizer High Pressure Reactor Trip Signal Initiation Due to Instrument 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 NAMES	DOCKET NUMBER(S)
0 3	2 2	9 3	9 3	0 0 5	0 0	0 4	2 1	9 3	N/A	0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (8)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)			
N	0 0 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 366A)
		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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Keith J. Schommer - Plant Nuclear Engineer	AREA CODE 4 1 4 3 8 8 - 2 5 6 0

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	

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)

Annual Transmitter Calibration Finds a Shift in the Pressurizer High Pressure Reactor Trip Signal Initiation Due to Instrument Drift.

On March 8, 1993, with the plant in cold shutdown, the pressurizer pressure transmitters were found out of tolerance (during SP 36-020A) and were subsequently recalibrated. A March 22, 1993, review of the pressure transmitter data determined that Technical Specification 2.3.a.2.A had been exceeded. TS 2.3.a.2.A requires a pressurizer high pressure reactor trip setpoint of less than or equal to 2385 psig. The March 22 review also incorporated the as-found calibration data (from February 22 and 23, 1993) for the associated bistables. This review determined that a reactor trip initiation on pressurizer high pressure would not have occurred until 2405 psig. Additionally the Safety Injection block permissive of less than 2000 psig noted in Table TS 3.5-3 would have occurred at 2030 psig.

This event occurred as a result of instrument drift. The suspected cause of this is aging of the transmitters.

Pending equipment availability, Kewaunee will replace the pressurizer pressure transmitters during the 1994 refueling outage. In the short term Kewaunee will trend monthly pressurizer pressure transmitter loop currents in order to detect drift in the transmitters outputs. If an adverse trend is indicated, appropriate corrective action will be taken which may include calibrating the affected transmitter(s) at power or adjusting the associated bistable setpoints.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Kewaunee Nuclear Power Plant	0 5 0 0 0 3 0 5	9 3	— 0 0 5	— 0 0	0 2 OF 0 5

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

Description of Event

This report describes an event which resulted in a condition prohibited by Kewaunee's Technical Specifications (TS). TS 2.3.a.2.A requires the reactor [RCT] trip setpoint for pressurizer [PZR] high pressure to be less than or equal to 2385 psig. On March 22, 1993, with the plant in refueling shutdown, it was determined that the TS reactor trip initiation requirements for pressurizer high pressure were not being met. Additionally, the safety injection (SI) block permissive was outside of the setting noted in items 1.c and 1.d of Table TS 3.5-3.

This event was discovered during the March 22, 1993 review of pressurizer pressure transmitter data from SP 36-020A, "Pressurizer Pressure Transmitter Calibration" [PDT]. SP 36-020A was performed on March 8, 1993 with the plant in cold shutdown. In accordance with plant procedures, a surveillance procedure exception report (SPER) was initiated to document the out of tolerance conditions on the pressure transmitters. The March 22 review also incorporated as-found calibration data for the associated bistables from the February 22 and 23, 1993 performance of SP 36-020B, "Pressurizer Pressure Instrument Calibration." The combined review of SP 36-020A and SP 36-020B data determined that the following bistable actuations existed:

Pressure Transmitter	Pressurizer high pressure (</= 2385 psig)	SI block permissive (< 2000 psig)
PT 429	2410 psig	2035 psig
PT 430	2405 psig	2030 psig
PT 431	2384 psig	2006 psig

Therefore, the required two out of three pressurizer high pressure signals would not have initiated the pressurizer high pressure reactor trip until 2405 psig as opposed to the 2385 psig TS requirement. Additionally, the 2 out of 3 needed signals for the SI block permissive would have initiated at 2030 psig as opposed to the noted TS condition of less than 2000 psig.

Cause of the Event

This event occurred as a result of instrument drift. The suspected cause of the instrument drift is aging of the transmitters. In 1992 the pressurizer pressure transmitter's zero suppression springs were replaced, however, this change did not seem to correct the transmitter drift. Additionally, an engineering support request was initiated in March 1992 to evaluate future replacement of Foxboro transmitters due to age related degradation.

Analysis of Event

This event is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by TS 2.3.a.2.A. This event has minimal safety significance for the following reasons:

1. The 20 psig shift in the pressurizer high pressure reactor trip signal initiation to 2405 psig did not exceed the 2410 psig trip initiation assumptions used in the Updated Safety Analysis Report (USAR). The only event referenced in the USAR relying on the pressurizer high pressure reactor trip signal is a loss of electrical load accident.

2. The transmitters' drift conservatively affected the following: reactor coolant's overtemperature delta temperature reactor trip signal, low pressurizer pressure reactor trip signal, low pressurizer pressure safety injection signal, and the subcooling margin monitor.

In regards to the SI block permissive, the pressurizer pressure transmitters' drift did not affect the operability of the SI system.

Corrective Actions

The following corrective actions have been or will be taken:

1. On March 8, 1993, upon identification of the out of tolerance condition, the transmitters were recalibrated.

2. Pending equipment availability, the pressurizer pressure transmitters will be replaced during the 1994 refueling outage. Additional Foxboro transmitters used in the reactor protection system are being trended for degradation and will be scheduled for replacement as necessary.

3. In the short term, Instrument and Control personnel will develop a procedure that will measure pressurizer pressure transmitter loop currents. This procedure will be performed monthly during the 1993-1994 operating cycle. The data obtained will be used to trend the performance of the pressurizer pressure transmitters. If an adverse trend develops appropriate corrective actions will be taken. Actions may include but are not limited to calibration of the transmitter(s) during operation or changing the bistable setpoints on associated pressurizer pressure bistables. The associated bistables include: low pressurizer pressure reactor trip, high pressurizer pressure reactor trip, high pressurizer pressure unblock SI, and low pressurizer pressure SI initiation. An engineering support request has been initiated to evaluate the impact of potential bistable setpoint changes.

Additional Information

Equipment Failures: None

Similar Events: LER 92-013 - "Low Pressure Safety Injection Technical Specification Exceeded Due to Abnormal Instrument Drift Potentially Caused by Zero Suppression Spring Degradation"