



Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

50-249

BBS Ltr.#246-74

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
April 3, 1974

Mr. J. F. O'Leary, Director
Directorate of Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

SUBJECT: LICENSE DPR-25, DRESDEN NUCLEAR POWER STATION, UNIT #3, REPORT OF ABNORMAL OCCURRENCE PER TABLE 3.2.1 OF THE TECHNICAL SPECIFICATIONS. TECHNICAL SPECIFICATION VIOLATION OF HIGH PRESSURE COOLANT INJECTION SYSTEM AREA TEMPERATURE DETECTORS.

- References: 1) Letter from W. P. Worden to Mr. A. Giambusso dated March 26, 1973,
2) Notification of Region III of AEC Regulatory Operations
Telephone: F. Maura, 1330 hours on March 25, 1974
Telegram: J. Keppler, 1445 hours on March 25, 1974
3) Drawings P & ID M-51
S & L 12E2527

Dear Mr. O'Leary:

This letter is to report a condition relating to the operation of the unit on March 25, 1974. On this date, 8 of the 16 area temperature switches for the high pressure coolant injection system (HPCI), were found with high operating points. This malfunction is contrary to Table 3.2.1 of the Technical Specifications which requires the switches to be set at $\leq 200^{\circ}\text{F}$.

PROBLEM

At the time of the occurrence, Unit 3 was being refueled and scheduled refuel surveillance was in progress. The following trip points were found on the HPCI area temperature sensors.

<u>Switch No.</u>	<u>As Found</u>	<u>As Left</u>
2371A	>212°F	190°F
2371B	205°F	195°F
2372B	>212°F	192°F
2373B	>212°F	190°F

8310190296 740403
PDR ADCK 05000249
S PDR

COPY SENT REGION

2987



April 3, 1974

<u>Switch No.</u>	<u>As Found</u>	<u>As Left</u>
2370C	>212°F	190°F
2371D	205°F	193°F
2372D	>212°F	193°F
2373D	208°F	192°F

The switches were immediately reset to the "as left" values indicated.

INVESTIGATION

On March 16, 1973, the same problem occurred on the Unit 3 HPCI temperature switches, and was reported to Mr. Giambusso. At that time, 13 of 16 switches were found with high setpoints. The corrective action taken as a result of that occurrence was to consult the manufacturer and confirm that the calibration method used by the Dresden Instrument Department was acceptable. The manufacturer (Fenwal) stated that the Dresden hot water technique was adequate. Also, four temperature sensors were checked approximately five months after the March 16, 1973 occurrence. At that time, the following setpoints were found:

<u>Switch No.</u>	<u>As Left 3-16-73</u>	<u>As Found 8-9-73</u>
2370C	193°F	197°F
2371D	195°F	192°F
2372B	193°F	193°F
2372C	193°F	197°F

The maximum change in setpoint was +4°F, which although above the stated repeatability error of $\pm 3^\circ\text{F}$ for a Fenwal series 17000 switch, was considered to be acceptable considering the number of sources in which a one degree error may be introduced. The "as found" data taken on March 25, 1974 shows that 3 of the 4 switches tested on August 9, 1973 had trip point changes which violated the 200°F limit. The greatest change occurred in switch 2372B which varied in excess of 19°F. (193°F to 212°F). The exact setpoint of the switch is unknown because of the 212°F limit of the hot water method used for calibration.

CORRECTIVE ACTION

The corrective action to solve this problem will be as follows:

1. Order a calibration kit from the manufacturer. This kit includes all equipment necessary to set Fenwal switches and is used by Fenwal for calibration purposes.

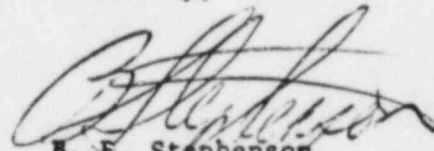
April 3, 1974

2. Order a new set, plus two spares, of calibrated Fenwal switches (190°F - 195°F) and install them in the Unit 3 HPCI area.
3. Varyify the repeatability of the spare switches by doing a series of repeatability tests using the calibration kit.
4. Evaluate the findings to determine if additional corrective action is needed.

EVALUATION

The HPCI area temperature sensors are arranged in a "one out of two twice" logic array in that a 2370 or 2371 sensor plus a 2372 or 2373 sensor will isolate the HPCI turbine. Analysis of the setpoints indicates that the "B" area (steam pipe area) would have operated at above 212°F and the "D" area (steam chest area) would have operated at 208°F. The "A" and "C" sensors are located in the same room and would have operated at 194°F. It is therefore determined that the safety of the plant personnel or the general public was not seriously jeopardized as a result of this occurrence.

Sincerely,



B. E. Stephenson
Superintendent

BBS:WEH:do