



# Commonwealth Edison Company

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50-249

WPW Ltr.#230-73

Dresden Nuclear Power Station  
R. R. #1  
Morris, Illinois 60450  
March 26, 1973

Mr. A. Giambusso  
Deputy Director for Reactor Projects  
Directorate of Licensing  
U. S. Atomic Energy Commission  
Washington, D. C. 20545



SUBJECT: LICENSE DPR-25, DRESDEN NUCLEAR POWER STATION, UNIT #3,  
SECTION 6.6.B.3 OF THE TECHNICAL SPECIFICATIONS.

Dear Mr. Giambusso:

This is to report a condition relating to the operation of the unit in which on March 16, 1973, 13 of the 16 high pressure coolant injection (HPCI) area temperature sensors were found to operate above the Technical Specification limit of  $\leq 200^{\circ}\text{F}$  as specified in Table 3.2.1.

## PROBLEM AND INVESTIGATION

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The HPCI area temperature sensors are Fenwal series 17000 differential expansion thermostatic units. The function of the switches is to isolate the HPCI system in the event of a break in the HPCI steam supply piping. The switches were found with settings as follows: Switches 2371A, 2373B, and 2372D at  $202^{\circ}\text{F}$ , switch 2373D at  $203^{\circ}\text{F}$ , switch 2370D at  $206^{\circ}\text{F}$ , switch 2371C at  $208^{\circ}\text{F}$ , switches 2370A, 2373A, and 2373C at  $210^{\circ}\text{F}$ , switch 2370C at  $212^{\circ}\text{F}$ , and switches 2372B, 2372C, and 2371D did not trip at  $212^{\circ}\text{F}$ , which is the maximum temperature available from the calibration equipment. All switches were immediately recalibrated to trip at a temperature between  $190-195^{\circ}\text{F}$ .

The electrical arrangement of the contacts on these temperature sensors is a "one-out-of-two twice" logic. Analysis of the circuitry reveals that in the event of a steam line break, HPCI isolation would have occurred at  $210^{\circ}\text{F}$ . Therefore, it is concluded that system safety was not jeopardized by the setpoint variations of the temperature sensors.

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inquiry

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The temperature sensors were calibrated only once previously, in August of 1970, by the electrical contractor who installed the system. At that time the Technical Specification limit of  $\leq 200^{\circ}\text{F}$  was considered to be a nominal number, not an absolute limit. Original calibration records reveal that the switches were normally set at exactly  $200^{\circ}\text{F}$ , and in some cases as high as  $203^{\circ}\text{F}$ . These settings did not allow for the normal instrument repeatability error of  $\pm 3^{\circ}\text{F}$  or for errors in calibration technique.

CORRECTIVE ACTION

At this time it is not certain if this change in temperature sensor setpoint was caused by calibration technique or instrument drift. In order to determine the cause, the calibration procedure will be reviewed and specific recommendations will be made to assure consistent and accurate sensor calibration. To determine if the problem is a result of setpoint drift, a calibration check will be conducted in approximately six months on four of the temperature sensors. The sensors checked will be the four found with setpoints farthest from the target setting.

Sincerely,

*G. J. Riedrich*  
for W. P. Worden  
Superintendent

WPW:do

cc: Ltr.Book File