

WPW Ltr. 4797-73

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
October 24, 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.C.1 OF THE TECHNICAL SPECIFICATIONS.
HPCI STEAM LINE HIGH FLOW SWITCH OUT OF CALIBRATION.

References: 1) Dwgs: P&ID M-51. S&L 12E2527

Dear Mr. Giambusso:

This letter is to report a condition relating to the operation of the unit at about 1600 hours on September 25, 1973. At this time high pressure coolant injection (HPCI) flow switch DPIS 3-2353 was found to have a trip setpoint of 152.0" H₂O. This setpoint is contrary to Table 3.2.1 of the Technical Specifications which require a setpoint of ≤ 150 " H₂O.

PROBLEM

At the time of the occurrence, Unit 3 was operating in a steady state condition with a thermal load of 2295 MWe. Routine surveillance was being performed by the Instrument Department when HPCI flow switch DPIS3-2353 was found to have a setpoint of 152" H₂O. The switch was immediately reset to 148" H₂O. The function of DPIS-3-2353 is to isolate the HPCI steam supply line in the event of a break in the steam piping.

INVESTIGATION

The subject flow switch is a Barton model 288 differential pressure sensor. This switch has had a tendency to drift in both the increasing and decreasing direction. A locking device was installed on the switch in February of 1973 in an attempt to eliminate the drift tendency. At the present time, the data from previous surveillances reveals that the locking device has not solved the drift problem. The overall problem of instrument setpoint drift is presently under investigation. The problem has plagued the station since its beginning, and no adequate corrective action has been determined at this time.

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October 24, 1973

The most recent approach to the problem has been to solicit aid from the manufacturers of the various drifting sensors. In the case of the Barton model 288, the factory representative has recommended that a field service engineer visit the station and analyse Barton switches with regard to application, factory adjustments, and calibration technique. The Barton representative has visited the Station and we are now awaiting his recommendations.

CORRECTIVE ACTION

The immediate corrective action was to change the setpoint of DPIS-3-2353 to bring it within the Technical Specifications. The calibration frequency for this switch will be increased to once per month until such time as this switch has demonstrated its reliability. Additional corrective action will be based on recommendations made by the Barton field service engineer.

EVALUATION

Flow switch DPIS-3-2353 is one of two flow switches that isolate the HPCI steam line in the event of a break in the steam piping. The second switch is DPIS-3-2352, and its setpoint at the time of the occurrence was 146" H₂O. Therefore, it is concluded that in the event of a break in the HPCI steam line piping, isolation would have occurred well within the Technical Specifications, and thus the safety of the station personnel and the general public was in no way compromised. The continued operation of the unit was considered safe.

Sincerely,

W. P. Worden

W. P. Worden
Superintendent

WPW:do

October 26, 1973



Mr. John F. O'Leary
Directorate of Licensing
Office of Regulation
U.S. Atomic Energy Commission
Washington, DC 20545

Dear Mr. O'Leary:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 -
DOCKET NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - ABNORMAL
OCCURRENCE REPORT BFAO-7327W

The purpose of this report is to provide details concerning the malfunction of recirculation jet pump riser d/p switch PdIS-68-24 in unit 1 at Browns Ferry Nuclear Plant on October 16, 1973. This occurrence was reported by telegram on October 17 to the Region II Directorate of Regulatory Operations, Atlanta, Georgia.

Description of the Incident

During routine surveillance testing on October 16, recirculation jet pump riser d/p switch PdIS-68-24 was found to operate outside the technical specification setpoint of greater than 0.5 but less than 1.5 psid as specified in table 3.2.B. The as-found setpoint was 1.8 psid.

Investigation and Corrective Action

Each of the four differential pressure switches operate relays whose contacts are arranged in a one out of two taken twice logic in the RHR injection circuit. The minimum number of channels required for each trip system is two. The other two channels were tested, found to operate satisfactorily, and, if required, would have performed their intended function. The reactor was in the hot standby condition.

These switches are Barton model 288 differential pressure switches. The switch mechanisms were inspected for binding misalignment of other irregularities. None was found. The switches were recalibrated and then functionally tested several times to ensure repeatability. A functional testing frequency of once every 2 weeks has been initiated

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Mr. John F. O'Leary
October 26, 1973

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 -
DOCKET NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - ABNORMAL
OCCURRENCE BFAO-7327W

for all four switches and will be continued until three consecutive tests prove satisfactory performance. At that time, the original test schedule of once a month will be resumed. We intend to install, as soon as possible upon receipt, new locking switchplate assemblies recently made available by the vendor to prevent setpoint drift.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

E. F. Thomas

for E. F. Thomas
Director of Power Production

CC: Mr. Norman C. Moseley, Director
Region II Regulatory Operations Office, USAEC
230 Peachtree Street, NW.
Atlanta, Georgia 30303