Commonwealth Edison
Quad-Cities Generating Station
Post Office Box 216
Cordova, Illinois 61242
Telephone 309/654-2241

NJK-75-219

April 21, 1975

Mr. John F. O'Leary, Director
Directorate of Licensing Regulation
U.S. Nuclear Regulatory Commission
Washington, D. C. 20545

REFERENCE: Quad-Cities Nuclear Power Station, Unit 1,
Docket No. 50-254, DPR-29
Appendix A, Sections 1.0.A.2, 3.1 and 6.6.B.1.a

Dear Mr. O'Leary:

Enclosed please find Abnormal Occurrence Report No. 50-254/75-8 for Quad-Cities Nuclear Power Station. This occurrence was previously reported to Region III, Directorate of Regulatory Operations by telephone on April 15, 1975 and to you and Region III, Directorate of Regulatory Operations by telecopy on April 16, 1975.

This report is submitted to you in accordance with the requirements of Technical Specification 6.6.B.1.a.

Very truly yours,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION

N. J. Kalivianakis
Station Superintendent

NJK/RAR/vmm

Enclosure

cc: Region III, Directorate of Regulatory Operations
J. S. Abel

50-254 incidents
4639

REPORT NUMBER: AO-50-254/75-8

REPORT DATE: April 24, 1975

OCCURRENCE DATE: April 14, 1975

FACILITY:

Quad-Cities Nuclear Power Station
Cordova, Illinois 61242

IDENTIFICATION OF OCCURRENCE:

Instrument setpoint drift of EHC Fluid Low Pressure sensors.

CONDITIONS PRIOR TO OCCURRENCE:

The unit was operating at 2400 MW_t and 800 MW_e.

DESCRIPTION OF OCCURRENCE:

On April 14, 1975, while doing routine surveillance calibration, three of the four EHC Fluid Low Pressure sensors tripped at values less than the Technical Specification limit of $\geq$ 900 psig. The fourth switch tripped within limits. The "as found" values for the four switches are as follows:

1-5600-PS-1	850 PSIG
1-5600-PS-2	865 PSIG
1-5600-PS-3	900 PSIG
1-5600-PS-4	895 PSIG

No operator actions were required to bring the situation under control.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE:

The designated cause of the occurrence is instrument drift. One switch, 1-5600-PS-2, had drifted the previous month and at that time its piston assembly was replaced. This eliminated any possibility of the occurrence being due to some physical defect or failure.

ANALYSIS OF OCCURRENCE:

The EHC fluid pressure sensors are part of the Reactor Protection System. Their function is to scram the reactor before the EHC fluid pressure decreases to a value where proper operation of the stop, control and bypass valves could not be depended upon. The reactor protection system is arranged in a one out of two twice logic. PS-1 and PS-3 are in the "A" channel and PS-2 and PS-4 are in the "B" channel. Since PS-3 tripped at 900 psig and PS-4 tripped at 895 psig, the unit would have scrammed when the EHC fluid pressure reaches 895 psig. This is well within the operating range of the EHC system. Therefore the safety implications of this occurrence are minimal.

CORRECTIVE ACTION:

The pressure switches in question were recalibrated and their frequency of calibration will be increased to once per week until their reliability can be demonstrated. An Action Item Record has been initiated to the Station Nuclear Engineering Department to investigate the possibilities of replacing these switches, and other similar instruments, with a more reliable type of sensor or trip system.

FAILURE DATA:

Equipment Identification:

Equipment Piece Number	1-5600-PS-1, 2, and 4
Manufacturer	Barksdale
Model	C9612-2
Range	135-1500 psi

Previous Failures:

Date	Unit	Switch Number
9-14-74	1	1-5600-PS-4
3-20-75	1	1-5600-PS-2

These are the failures occurring since the January 12, 1973, instrument set-point change for these switches. Due to the instrument drift experience, investigation of a more acceptable substitute has been requested as noted above.