



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

50-265

NJK-74-6

March 21, 1974



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

Reference: Quad-Cities Nuclear Power Station, Unit Two  
License DPR-30, Docket 50-265, Appendix A,  
Section 1.0.A.2, 3.7.A.5.a, 6.6.B

Dear Mr. O'Leary:

The purpose of this letter is to inform you of the details concerning an abnormal occurrence which took place on March 15, 1974 whereby the Unit Two primary containment oxygen concentration increased to approximately 5.5 percent, exceeding Technical Specification 3.7.A.5.a. This abnormal occurrence was reported to you by telegram on March 15, 1974.

#### PROBLEM AND INVESTIGATION

At 1205 on March 15, 1974, with Unit Two operating at 778 MWe, the primary containment oxygen concentration was confirmed to be 5.5 percent oxygen as indicated by the Primary Containment Oxygen Analyzer System Control Converter, 2-8741-5, on panel 912-7. Radiation protection department made this confirmation based on primary containment atmospheric samples that showed the primary containment oxygen concentration to be 5.2 percent oxygen.

The primary containment nitrogen make-up regulator bypass valve 2-8799-21 was opened to admit more nitrogen into the primary containment. The primary containment oxygen concentration was reduced to 5.0 percent oxygen by 1630.

#### EVALUATION

Effects of this abnormal occurrence are minimal. The total increase of the primary containment oxygen concentration amounted to 0.5 percent oxygen in excess of the Technical Specifications limit. Exceeding this limit by 0.5 percent oxygen

8306130082 740321  
PDR ADOCK 05000265  
S PDR

COPY SENT REGION

March 21, 1974

for a short time has a relatively insignificant effect since power operation is allowable for twenty-four hours after going into the RUN mode and twenty-four hours before going out of the RUN mode without significant effects on plant safety.

#### DETERMINATION OF CAUSE AND CORRECTIVE ACTION

The cause of this abnormal occurrence has been determined to be air in-leakage into the drywell pneumatic system. This was determined by Radiation Protection department taking atmospheric samples from the drywell pneumatic system receiver. It was found that the oxygen concentration in the receiver was 6.0 percent oxygen. In comparing the results of these samples to the primary containment atmospheric sample taken previously (5.2 percent oxygen), air in-leakage into the drywell pneumatic system was resolved as the cause of the primary containment oxygen concentration increase.

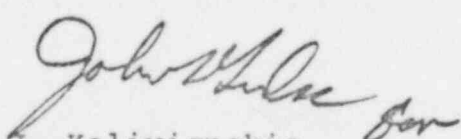
Acting upon this conclusion, all flange bolts and other fittings on the drywell pneumatic system were tightened. As a result, comparative atmospheric samples taken from the drywell pneumatic receiver and the primary containment on March 18, 1974 indicated 4.0 percent oxygen and 4.3 percent oxygen respectively. It appears that the air in-leakage into the drywell pneumatic system has been stopped and the probability of further primary containment oxygen concentration problems has been reduced.

#### CUMULATIVE EXPERIENCE

For several weeks prior to this occurrence it had been necessary to run with the nitrogen make-up bypass valve open quite frequently in order to maintain the primary containment oxygen concentration within the Technical Specifications limit. The repairs that were made subsequent to this occurrence appear to have eased this problem. Since the repairs were made it has been possible to operate with the bypass valve open at less frequent intervals than before the occurrence. It is felt that the probability of repeating this occurrence has been reduced by the above actions.

Very truly yours,

COMMONWEALTH EDISON COMPANY  
QUAD CITIES NUCLEAR POWER STATION

  
N. J. Kalivianakis  
Station Superintendent

NJK/lk