



Commonwealth Edison

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January 23, 1985

Mr. James G. Keppler
Regional Administrator
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Byron Station Unit 1
I&E Inspection Report No. 50-454/84-73
NRC Docket No. 50-454

Reference (a): November 23, 1984 letter from R. L. Spessard
to Cordell Reed

Dear Mr. Keppler:

Reference (a) provided the results of inspections of Byron Station testing activities by Messrs. Ring, Ferrell, VanDenburgh, Butler, Dunlop and Reys and Ms. McCormick-Barger. During that inspection certain activities were found to be not in compliance with NRC requirements. No response was required for two of the three items of noncompliance. Commonwealth Edison Company's response to the other item in the Notice of Violation is provided in the enclosure.

Very truly yours,

Dennis L. Farrar
Director of Nuclear Licensing

Enclosure

cc: Resident Inspector - Byron

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ATTACHMENT A
Response to Notice of Violation

Violation

1. 10 CFR 50, Appendix XI, Test Control, as implemented by the Commonwealth Edison Quality Assurance Manual, Quality Requirement 11.0 and the Byron Startup Manual requires that test results be evaluated to assure conformance with design and performance requirements and that the data display the adequacy of the equipment to meet specified requirements.

Contrary to the above, the following examples of inadequate evaluation of the results of preoperational test procedure SI 73.13, "Safety Injection-ECCS Check Valve Operability and Leakage", were identified.

- a. The licensee approved the results of retest R-248 with acceptance criterion 4.2 which allowed a leakage value in excess of that which would be required by proposed Technical Specification 3.4.6.2.f. (the Technical Specification has subsequently been approved).
- b. The licensee approved the results of leakage tests performed at a pressure less than the Reactor Coolant System pressure described in proposed Technical Specification 3.4.6.2.f (or functional pressure) as described in the specification and in the ASME Code Section XI subsection IWV, "Valve Leak Rate Test". If the adjustment is applied to the test results, ISI 8956D, ISI 8819A, ISI 8819B, ISI 8819C, ISI 8819D, ISI 8900A, and ISI 8900B exceed 1.0 gpm leakage and hence would not satisfy Technical Specification 3.4.6.2.f.

Response to Item of Violation

In items of violation 454/84-73-03a and 454/84-73-03b the inspector cited two examples of failure to demonstrate the adequacy of equipment to meet Technical Specification requirements within preoperational test SI-73.13 and retest R-248. Although we understand that the purpose of preoperational testing includes demonstration of the adequacy of equipment design and verification of conformance to design, we do not feel that verbatim verification of Technical Specification surveillance requirements for equipment performance is required within preoperational tests. This is underscored by the fact that the Technical Specifications were not approved until the preoperational test program was near completion. Demonstration of equipment availability and operability is demonstrated prior to the equipment being required for service by satisfying Technical Specification mandated surveillances.

The inspector stated that acceptance criterion 4.2 of Retest R-248, which allowed 10.0 gpm cumulative leakage for the four pairs of SI8956 and SI8948 check valves, could have allowed individual check valve leak rates in excess of the 1.0 gpm maximum leak rate required by approved Technical Specification 3.4.6.2.f. The SI8948 and SI8956 valves were satisfactorily tested and demonstrated to have a leak rate of less than one gpm at a reduced pressure during retest R-248. This resulted in meeting acceptance criteria 4.1 and 4.2.

The leak rate results obtained for valves SI 8819A, B, C, D, SI 8900A, B, and 8956D in retest R-248, when adjusted for reduced pressure testing, would have failed the 1.0 gpm Technical Specification maximum allowable leak rate criterion. It was intended, however, that the final demonstration of equipment operability for the valves listed in Technical Specification Table 3.4-1 would be performed by a Technical Specification surveillance prior to being required for service.

Preoperational test results collected in SI-73.13 and R-248 utilized a reduced pressure testing technique. Approved Technical Specification 3.4.6.2.f requires that adjustments be made to correct valve leak rates obtained during leak rate tests performed at reduced pressures. At the time that testing and results evaluations were being performed on preoperational test SI-73.13 and retest R-248 final Technical Specifications had not been approved for Byron Station. "Proof and Review" draft Technical Specification 3.4.6.2 did not address reduced pressure leak rate testing.

Our experience with check valve leak rates had shown that valve leak rate testing performed at higher pressures normally produced lower leak rates because of higher disk seating forces. By testing at a reduced pressure, it was felt that an acceptable approach was being used and that no correction for testing at reduced pressure was necessary for preoperational test evaluation. It should be noted that, with no correction for reduced pressure testing, all of the valves required to be tested in preoperational test SI-73.13 met their 1.0 gpm maximum allowable Technical Specification leak rate criterion in retest R-248.

AIR 6-85-016 has been written to ensure that the SI check valve leakages obtained during Unit Two preoperational testing will be adjusted as necessary based upon the Unit Two Technical Specifications, when available. The Braidwood pre-operational test data will also be adjusted as necessary.

Corrective Action Taken and the Results Achieved

Special Test Procedure SPP-85-1 was used to leak test the valves listed in Technical Specification Table 3.4-1. Review and approval of the results of this test are complete. The reviews indicate that the leak rate results obtained when adjusted for reduced pressure testing are acceptable.

In the future, leakage through the valves listed in Technical Specification Table 3.4-1 will be verified to be within Technical Specification limits by Surveillance BVS 4.6.2.2-1.

Corrective Action Taken to Avoid Further Noncompliance

Periodic performance of surveillance testing of Reactor Coolant System pressure isolation valves listed in Technical Specification Table 3.4-1 in accordance with the requirements of Technical Specification 3.4.6.2 will ensure that test results obtained using reduced pressure valve leakages are adjusted as necessary to reflect the functional pressure valve leak rate.

Date of Full Compliance:

Surveillance testing results for the SI check valves have been reviewed and were approved prior to entry into mode 2.