



THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

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PERRY NUCLEAR POWER PLANT

Al Kaplan

VICE PRESIDENT
NUCLEAR GROUP

January 8, 1988
PY-CEI/NRR-0766 L

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Perry Nuclear Power Plant
Docket No. 50-440
Request for Extending Test
Intervals for Specified Valve
Leak Rate Tests

Gentlemen:

By letters dated September 11, 1987 (PY-CEI/NRR-0714 L and PY-CEI/NRR-0715 L) the Cleveland Electric Illuminating Company (CEI) requested a change to the Technical Specifications (NPF-58, Appendix A) for the Perry Nuclear Power Plant, Unit 1, and an exemption to 10 CFR 50, Appendix J Requirements.

Based on discussions with the NRC staff in December 1987, and on January 6, 1988, supplemental information is being provided. The attachment to this letter summarizes the industry reviews performed to evaluate industry experience on the specific types of valves being deferred and the recent industry experience of leak rate results after leak rate testing extensions have been granted. If you have any questions, please feel free to call me.

Very truly yours,

Al Kaplan
Vice President
Nuclear Group

AK:njc

Attachment

cc: K. Connaughton
T. Colburn
USNRC, Region III
James Harris (State of Ohio)

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On September 11, 1987, CEI submitted both a Technical Specification Change Request and a 10 CFR 50 Appendix J Exemption Request to permit a one time test interval extension for a specific group of valves requiring leak testing under the provisions of the Technical Specifications, 10 CFR 50 Appendix J, or both. Based on recent discussions with the NRC staff concerning these requests CEI was asked to supply additional information in two areas dealing with industry experiences.

First CEI was asked to determine what type of failure history valves of the same size, type, and manufacturer as the ones being deferred had experienced in the industry. There are a total of twelve (12) different valve groupings being deferred. CEI performed a review of INPO's Nuclear Plant Reliability Data System (NPRDS) to determine how many leak rate test failures had been reported on the twelve types of valves. Five of the valve groups did not indicate any leak rate failures in the NPRDS data reviewed. For the seven valve groups which had experienced at least one leak rate failure, the specific valve manufacturer was contacted to try to determine an approximate number of each type of valve that was being used in the nuclear industry. Based on the information from the valve manufacturers it appears that the valves experiencing leak rate failure is a very small percentage of the total valve population (on the order of 1 to 2% failure rate). This is without considering multiple successful testing of most of these valves in the industry. It should be also noted that the valves in the NPRDS data base for the most part have been in service for significant periods whereas the valves in the Perry plant will have experienced only a part of the first fuel cycle power operation time by the date of the proposed testing. The NPRDS data does not suggest that these valves will experience excessive leakage during this time period.

The second industry review performed was to contact three BWR plants which had been granted extensions of leak test intervals on valves to try to determine if the valves experienced a higher leak rate due to the testing extension. The three utilities reviewed a total of 49 valves with the following results:

Leak rate <u>stayed the same</u> as previous test result -	10
Leak rate <u>decreased</u> from previous test result -	18
Leak rate <u>increased</u> from previous test result -	21

The test interval extensions for the plants ranged from 16 days to 100 days. Several of the increased leak rates reported were very small, and a number of others were due to crud deposits found under the seating surfaces, not due to valve malfunctions. One utility with extensive testing history reported that the valves that showed an increase after the test interval extension were ones which had also shown increased leak rates in previous normal interval testing. The increased leak rates on the valves granted an extension, did not result in exceeding the 10 CFR 50, Appendix J limits at any of the plants. From the information collected a direct relationship between test intervals and increased leak rates could not be determined. Thus, there was nothing found in the information which would indicate that the extended test intervals would have a detrimental effect on the overall leak rates of the valves involved. In fact, there is reasonable assurance that increased leak rates, if any, would be small and well within the limits of 10 CFR 50, Appendix J.