



DUKE POWER

February 7, 1995

U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Document Control Desk

Subject: Catawba Nuclear Station
Docket Numbers 50-413 and -414
Request for Scheduler Exemption to 10 CFR 50 Appendix J, Supplemental
Information

By letter dated October 18, 1994, Duke Power Company submitted: 1) a request for exemption from the requirement of 10 CFR 50 Appendix J III D 1.(a) that the third containment Integrated Leak Rate Test (ILRT) be performed during the in-service inspection (ISI) refueling outage, and 2) a concurrent request for a change to Technical Specifications to defer the ILRT for one refueling outage. On February 7, 1995, a telephone conference was held between the NRC and Duke to discuss the requests. The purpose of this letter is to provide supplemental information identified in the telecon.

In order to justify the granting of an exemption to the requirements of 10 CFR Part 50, paragraph 50.12(a)(1) requires that the licensee show that the proposed exemption will not pose an undue risk to the public. That this proposed change will **not** pose an undue risk is demonstrated by the analysis presented in draft NUREG-1493, which concludes that an increase in the test interval to once every 20 years would "lead to an imperceptible increase in risk." The analyses in draft NUREG-1493 are considered to be specifically applicable to Catawba because: 1) the requested exemption would result in a one-time increase in the test interval to 5 years, not 20; 2) the population density around Catawba is less than that used in the study (329 people per square mile, vs. 340 used in the study); 3) no ILRT at Catawba has failed; 4) the core inventory used in the study was represented by a 3412 Mwt PWR. Catawba is a 3411 Mwt PWR. Other factors which lead to the conclusion that the proposed change will not pose an undue risk include the fact that local leak rate testing, which identifies 97% of leakage in excess of prescribed limits, will remain in place at its current test frequency; the detailed, proceduralized containment civil inspection which is normally performed in conjunction with an ILRT will be performed in place of the scheduled ILRT, to identify potential structural deteriorations; and the historical leak-tightness of the containment structure, as evidenced by 2 successive ILRTs in which the as-found leakage did not exceed 22.5% of the allowable leakage rate.

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A comparison was made between the risk analysis presented in draft NUREG-1493 and a probabilistic risk assessment performed for Catawba Nuclear Station. While the quantitative results of the NUREG are not directly applicable to plants not used in the study, similar conclusions can be made concerning Catawba. NUREG-1493 indicates that reactor accident risks are dominated by accident sequences that result in failure or bypass of the containment. This conclusion is also valid for Catawba. Considering only the Catawba accident sequences that do not result in containment failure, containment leakage contributes approximately 0.08 to 0.09 percent to off-site risk (whole-body person-rem, thyroid nodules, and latent fatalities). NUREG-1493 indicated that containment leakage contributed from 0.02 to 0.10 percent to latent cancer risk. The comparison between the analysis of NUREG-1493 and the Catawba PRA concludes that increases in containment leakage at Catawba are expected to produce increases in accident risk similar to the results in NUREG-1493.

Special circumstances, as defined in 10 CFR 10.12(a)(2)(ii), are present in that the requirement to perform the third ILRT during the ISI outage is not necessary to achieve the underlying purpose of the rule. The purposes of the rule, as stated in Section I of Appendix J, are to ensure that: a) leakage through the primary reactor containment and systems and components penetrating containment shall not exceed allowable values, and b) periodic surveillance of reactor containment penetrations and isolation valves is performed so that proper maintenance and repairs are made. One of the significant factors in assuring that the proposed exemption will not pose an undue risk to the public, as noted above, is the local leak rate testing (LLRT) which is performed. That the LLRT program at Catawba provides an effective mechanism for maintaining containment integrity is perhaps best demonstrated by the fact that the most recent ILRT at Catawba Unit 1 was performed at the front end of the refueling outage; before any repairs or adjustments were made to valves or penetrations. Nevertheless, the as-found leakage did not exceed 22.5% of the allowable leakage rate. The fact that no leakage paths were identified by an ILRT, and that the ILRT met the acceptance criteria with significant margin confirms the results of the Type B and C testing.

The frequency and scope of the Type B and C LLRT program are not being changed by this exemption request. The LLRT program will continue to effectively detect containment leakage resulting from the degradation of active containment isolation components, as well as containment penetrations. Administrative limits have been established for each Type B or C component at a fraction of the allowable leak rate, such that any leakage detected in excess of the administrative limit will indicate a potential valve or penetration degradation. In instances in which a component's leakage exceeds its

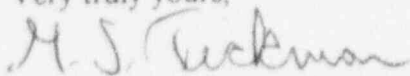
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administrative limit, proceduralized controls in the test program require that a work order be written to repair the component.

In view of the foregoing, and the information presented in the original October 18, 1994 application, it is considered that the proposed exemption will not present an undue risk to the public, and is consistent with the common defense and security as required by 10 CFR 50.12(a)(1).

If there are any questions, or additional information is required, please call Scott Gewehr at (704) 382-7581.

Very truly yours,



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