

NUCLEAR REGULATORY COMMISSION

[Docket No. 50-237]

Commonwealth Edison Company; Dresden Nuclear Power Station, Unit 2; Environmental Assessment and Finding of No Significant Impact

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of a schedular exemption from the requirements of 10 CFR Part 50 to Commonwealth Edison Company (ComEd, the licensee) for the Dresden Nuclear Power Station, Unit 2, located in Grundy County, Illinois.

Environmental Assessment

Identification of Proposed Action

The proposed action would grant a one-time schedular exemption from the requirements of Sections III.D.2(a) and III.D.3 (Type B and Type C tests, respectively) of Appendix J to 10 CFR Part 50 relating to the primary reactor containment leakage testing for water-cooled reactors. The purpose of the tests is to assure that leakage through primary reactor containment shall not exceed allowable leakage rate values as specified in the Technical Specifications and that periodic surveillance is performed.

Need for the Proposed Action

By letter dated November 23, 1994, the licensee requested, pursuant to 10 CFR 50.12(a), a one-time schedular exemption for Dresden, Unit 2, from the local leak rate test intervals for certain Type B and C leak rate tests required by 10 CFR Part 50, Appendix J, Sections III.D.2(a) and III.D.3. The exemption is requested to support the current outage schedule and to avoid the potential for an earlier reactor shutdown. If a forced outage is imposed to perform testing, it would present undue hardship and cost in the form of increased radiological exposure. Furthermore, if a forced outage is imposed to perform the required testing, an additional plant shutdown and startup will be required. In order to rectify these concerns, ComEd proposes to reschedule the Dresden, Unit 2, refuel outage from September 1994 to July 16, 1995. Increasing the interval between refueling outages will cause Dresden, Unit 2, to exceed the Type B and C leak rate testing surveillance intervals required for Type B and C leak rate tests which cannot be performed during reactor operation.

Environmental Impacts of the Proposed Action

The proposed action includes exemptions from performing certain Type B and C tests for a maximum period of 180 days beyond the required Appendix J test intervals. As stated in 10 CFR Part 50, Appendix J, the purpose of the primary containment leak rate testing requirements is to ensure that leakage rates are maintained within the Technical Specification requirements and to assure that proper maintenance and repair is performed throughout the service life of the containment boundary components. The requested exemption is consistent with the intent of 10 CFR 50.12(a), in that it represents a one-time only schedular extension of short duration. The required leak tests will still be performed to assess compliance with Technical Specification requirements, albeit later, and to assure that any required maintenance or repair is performed. As noted in Sections III.D.2(a) and III.D.3 of Appendix J, it was intended that the testing be performed during refueling outages or other convenient intervals. Extending the Appendix J intervals by a small amount to reach the next refueling outage will not significantly impact the integrity of the containment boundary, and therefore, will not significantly impact the consequences of an accident or transient in the unlikely event of such an occurrence during the 180-day extended period.

The exemption request is further supported by the information provided in the application. ComEd has identified those Type B and C volumes which will be leak tested during reactor operation. In addition, ComEd has identified those volumes that will be leak tested should a forced outage of suitable duration occur prior to July 16, 1994 (180-day maximum exemption request). These commitments reduce the number of volumes which need an exemption and the length of time for which an exemption would be required should a forced outage of sufficient duration occur. ComEd has also provided the testing methodology which will be used if forced outages occur. In order to provide an added margin of safety and to account for possible increases in the leakage rates of untested volumes during the relatively short period of the exemption, Dresden will impose an administrative limit for maximum pathway leakage of 80 percent of 0.6L_a for the remaining Unit 2 fuel cycle.

Past Unit 2 local leak rate test data have, in general, demonstrated good leak rate test results. The current maximum pathway leakage rate for

Dresden, Unit 2, as determined through Type B and C leak rate testing is 309.46 standard cubic feet per hour (scfh). This value is approximately 63 percent of the Technical Specification limit of 488.45 scfh (0.6L_a). In addition, the previous outage "as left" total minimum pathway leakage rate for Type B and C testable penetrations was 173.25 scfh. This value is approximately 28 percent of the Technical Specification limit of 610.56 scfh (0.75L_a). By using the minimum pathway methodology, a conservative measurement of the actual leakage expected through a pathway under post-accident conditions can be determined. Based on the methodology, the low "as left" leakage value, and the previous local leak rate test data, it is clear that extending the test interval a maximum of 180 days for certain volumes will not affect the overall integrity of the containment.

The previous outage "as left" Integrated Leak Rate Test, completed on May 14, 1993, indicated that the primary containment overall integrated leakage rate, which obtains the summation of all potential leakage paths including containment welds, valves, fittings, and penetrations, was 493.36 scfh. This value is approximately 80.8 percent of the limit specified in the Technical Specifications.

The above data, along with the station-imposed limit for maximum pathway leakage, provide a basis for showing that the probability of exceeding the offsite dose rates established in 10 CFR Part 100 will not be increased by extending the current Type B and C testing intervals for a maximum of 180 days. The proposed exemption does not affect plant nonradiological effluents and has no other environmental impact. Therefore, the Commission concludes there are no measurable environmental impacts associated with the proposed exemption.

Alternatives to the Proposed Action

Since the Commission has concluded there is no measurable environmental impact associated with the proposed exemption, any alternative with equal or greater environmental impact need not be evaluated. The principal alternative to the exemption would be to require rigid compliance with the requirements of Sections III.D.2(a) and III.D.3 of Appendix J to 10 CFR Part 50. Such action would not enhance the protection of the environment and would result in increased radiation exposure for the licensee.