

November 10, 1994

Mr. D. L. Farrar  
Manager, Nuclear Regulatory Services  
Commonwealth Edison Company  
Executive Towers West III, Suite 500  
1400 OPUS Place  
Downers Grove, IL 60515

SUBJECT: SCHEDULAR EXEMPTION FROM 10 CFR PART 50, APPENDIX J - DRESDEN  
NUCLEAR POWER STATION, UNIT 2 (TAC NO. M90726)

Dear Mr. Farrar:

On October 28, 1994, Commonwealth Edison Company (ComEd) submitted a request for a schedular Exemption that would permit operation for an additional 242 days before completing a 10 CFR Part 50, Appendix J, Type A test at Dresden, Unit 2. In its submittal, ComEd provided the technical justification for going beyond the 18-month requirement of the Type A test interval prescribed in 10 CFR Part 50, Appendix J.

On the basis of the information provided in your request, the staff is granting the enclosed Exemption pursuant to 10 CFR 50.12.

This Exemption is being forwarded to the Office of the Federal Register for publication.

Sincerely,

Original Signed By:

Jack W. Roe, Director  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Docket No. 50-237

Enclosure: Exemption

cc w/encl: see next page

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Mr. D. L. Farrar  
Commonwealth Edison Company

Dresden Nuclear Power Station  
Unit Nos. 2 and 3

cc:

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Administration Building  
1320 Union Street  
Morris, Illinois 60450

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the matter of

COMMONWEALTH EDISON COMPANY

(Dresden Nuclear Power Station,  
Unit 2)

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)  
)  
)  
)

Docket No. 50-237

EXEMPTION

I.

Commonwealth Edison Company (ComEd, the licensee) is the holder of Facility Operating License No. DPR-19, which authorizes operation of the Dresden Nuclear Power Station, Unit 2 (the facility), at a steady-state power level not in excess of 2527 megawatts thermal. The facility is a boiling water reactor located at the licensee's site in Grundy County, Illinois. This license provides, among other things, that the facility is subject to all rules, regulations, and Orders of the Nuclear Regulatory Commission (the Commission) now or hereafter in effect.

II.

By letter dated October 28, 1994, pursuant to 10 CFR 50.12(a), ComEd requested a schedular exemption for Dresden, Unit 2, from the 18-month test interval for a Type A Integrated Leak Rate Test (ILRT) as required by 10 CFR Part 50, Appendix J, Section III.A.6.(b). The exemption is requested to avoid a potential reactor shut down to perform the Type A test.

Due to two forced outages, ComEd has had to reschedule the Dresden, Unit 2, refueling outage from September 1994 to July 1995. Subsequently, ComEd requested a maximum extension of up to an additional 242 days for the 18-month Appendix J test interval for a Type A test. The Type A test can not be performed during power operation.

### III.

In its letter dated October 28, 1994, ComEd requested a one-time exemption from the 18-month Type A test interval requirement of Appendix J. ComEd has provided leakage test results and maintenance information for the past two outage testing programs. The two consecutive Type A ILRT failures that placed Dresden, Unit 2, on the accelerated test schedule were because of the addition of the Type B and C test leakage results to the Type A leakage rate - not problems with the Type A boundaries. The minimum pathway data from the last two Unit 2 refueling outages (D2R12 and D2R13) indicate that, on a minimum pathway basis, the quality of primary containment does not degrade excessively through the course of the fuel cycle. The total containment leakage rate minus the Type B and C leakages for the last two Type A test failures during D2R12 and D2R13 are 285.5 standard cubic feet per hour (scfh) and 302.62 scfh, respectively. These values are 47 percent and 50 percent of the Type A ILRT acceptance criteria of 610.56 scfh ( $0.75L_a$ ). The acceptance criteria are from the Dresden, Unit 2, Technical Specification (TS) Section 3.7.A.2.b.(1). During the D2R12 refueling outage, the Type A ILRT failed due to a leak of the inboard flange of the reactor building to suppression chamber vacuum breaker valve (2-1601-20A). This leakage was quantified to be 12720.05 scfh. If this did not occur, the Type A ILRT results would have been 543.40 scfh, which is less than the TS limit of 610.56 scfh ( $0.75L_a$ ). During the D2R13 refueling outage, the Type A test failed due to the as-found minimum pathway leakage of primary containment isolation valves found during Type B and C testing. The volumes that were the major contributors to this failure are as follows: The "B" feedwater line isolation check valves (2-220-58B and

2-220-62B), shutdown cooling isolation valves (2-1001-1A, 2-1001-1B, 2-1001-2A, 2-1001-2B and 2-1001-2C), reactor water clean-up isolation valves (2-1201, 2-1201-1A, 2-1201-3, 2-1299-004 and 2-1299-005), low pressure coolant injection containment spray isolation valves (2-1501-27B and 2-1501-28B), high pressure coolant injection drain pot to suppression chamber valves (2-2301-34 and 2-2301-71), traversing incore probe purge check valve (2-4799-514), electrical penetration X-202W, and drywell bellow X-113. The total minimum pathway leakage for these volumes was 685.75 scfh. Each of the above valves and volumes were repaired during the refueling outage and subsequently passed post-maintenance Type B and C tests prior to restart of Unit 2 for the current operating cycle.

At the time the pertinent requirements of Appendix J were established (1973), the typical nuclear power plant fuel cycle lasted 12 months. Section III.A.6.(b) may have been written to require a Type A test at every refueling outage - specifying a numerical cap on the interval to prevent extreme cases of very long intervals (caused by extended shutdowns or operations at reduced power) between tests. An 18-month cap was reasonable for 12-month fuel cycles, but with the current 18- and 24-month fuel cycles, it clearly is not sufficient. The intent of Section III.A.6.(b) is to increase the testing frequency for a containment that exhibits leakage problems, but not to increase it so much that special shutdowns are required. Refueling outages are the only reasonable time to perform Type A test, since most plants do not have extended shutdowns at any other time.

In order to add an additional margin of safety and to account for the possible increase in the leakage of a containment penetration, the licensee

has imposed an administrative limit for Dresden, Unit 2, on the total maximum allowable containment leakage rate until the completion of the current operating cycle. This limit will be 519.0 scfh, which is 85 percent of the TS limit of 610.56 scfh ( $0.75L_g$ ). All additional minimum pathway leakage will be added to the current total as operational Type B and C leak rate tests are performed during the current operating cycle. These corrective measures taken should reduce the chances of D2R14 failing the "As Found" Type A ILRT test.

#### IV.

The staff has reviewed ComEd's submittal regarding the Appendix J test interval exemption request. Based on the above, the staff concludes that the licensee's corrective action and administrative leakage limit have reduced the likelihood of excessive leakage during the proposed extension of the Type A test interval. Further, considering the intent of the 18-month interval cap and its relation to longer fuel cycles, the staff finds that the safety benefit to be derived from performing a Type A test at 18 months rather than 26 months does not justify the hardship of a forced plant shutdown. Therefore, the staff finds that the requested Type A interval extension should be granted.

This is a one-time exemption from the 18-month Type A test interval requirements as prescribed in 10 CFR Part 50, Appendix J, and is intended to be in effect until July 14, 1995.

In its October 28, 1994, letter, ComEd also identified special circumstances. As discussed above, the exemption request is for a short duration relative to the 18-month requirement. This meets a criterion for a special circumstance per 10 CFR 50.12(a)(2)(v), i.e., "The exemption would

provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation."

V.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a), that (1) this exemption is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest, and (2) the Exemption would provide only temporary relief from the applicable regulation and the licensee has made good faith efforts to comply with the regulation. Therefore, the Commission hereby grants an exemption as described in Section III above from 10 CFR Part 50, Appendix J, Section III.A.6.(b), to the extent that the 18-month interval for performing the Type A test may be extended for 242 days until July 14, 1995, on a one-time only basis, for Dresden, Unit 2.

Pursuant to 10 CFR 51.32 the Commission has determined that the granting of this Exemption will have no significant impact on the environment (59 FR 56095).

This exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By:

Jack W. Roe, Director  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland  
this 10th day of November 1994

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\*See previous concurrence

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