

May 24, 1993

Docket No. 50-461

Mr. Frank A. Spangenberg
Manager - Licensing and Safety
Clinton Power Station
P. O. Box 678
Mail Code V920
Clinton, Illinois 61727

Dear Mr. Spangenberg:

SUBJECT: ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT -
PARTIAL EXEMPTIONS FROM THE REQUIREMENTS OF APPENDIX J TO 10 CFR
PART 50 - CLINTON POWER STATION, UNIT NO. 1 (TAC NOS. M85815 AND
M86270)

Enclosed for your information is a copy of an Environmental Assessment and
Finding of No Significant Impact. The assessment relates to your requests
dated February 17 (U-602097) and April 16, 1993 (U-602116), for partial
exemptions from the requirements of 10 CFR Part 50, Appendix J, Sections
III.A.1.(a), III.D.1.(a), and III.A.5.(b); and for a one-time partial
exemption from the requirements of Sections III.B.1.(b), III.B.3, and III.D.2.

This Environmental Assessment has been forwarded to the Office of the Federal
Register for publication.

Sincerely,

Original signed by:

Douglas V. Pickett, Senior Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
see next page

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PDR ADOCK 05000461
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Mr. Frank A. Spangenberg
Illinois Power Company

Clinton Power Station
Unit No. 1

cc:

Mr. J. S. Perry
Vice President
Clinton Power Station
Post Office Box 678
Clinton, Illinois 61727

Illinois Department
of Nuclear Safety
Office of Nuclear Facility Safety
1035 Outer Park Drive
Springfield, Illinois 62704

Mr. J. A. Miller
Manager Nuclear Station
Engineering Department
Clinton Power Station
Post Office Box 678
Clinton, Illinois 61727

Mr. Donald Schopfer
Project Manager
Sargent & Lundy Engineers
55 East Monroe Street
Chicago, Illinois 60603

Sheldon Zabel, Esquire
Schiff, Hardin & Waite
7200 Sears Tower
233 Wacker Drive
Chicago, Illinois 60606

Resident Inspector
U.S. Nuclear Regulatory Commission
RR#3, Box 229 A
Clinton, Illinois 61727

Ms. K. K. Berry
Licensing Services Manager
General Electric Company
175 Curtner Avenue, M/C 382
San Jose, California 95125

Regional Administrator, Region III
799 Roosevelt Road, Building 4
Glen Ellyn, Illinois 60137

Chairman of DeWitt County
c/o County Clerk's Office
DeWitt County Courthouse
Clinton, Illinois 61727

Mr. Robert Neumann
Office of Public Counsel
State of Illinois Center
100 W. Randolph, Suite 11-300
Chicago, Illinois 60601

UNITED STATES NUCLEAR REGULATORY COMMISSION

ILLINOIS POWER COMPANY

SOYLAND POWER COOPERATIVE, INC.

CLINTON POWER STATION, UNIT 1

DOCKET NO. 50-461

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of a partial exemption from the requirements of 10 CFR Part 50, Appendix J, Sections III.A.1.(a), III.D.1.(a), and III.A.5.(b); and issuance of a one-time partial exemption from the requirements of Sections III.B.1.(b), III.B.3, and III.D.2 to Illinois Power Company, et al. (IP, the licensee), for the Clinton Power Station, Unit 1, located in DeWitt County, Illinois.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action

10 CFR Part 50, Appendix J, Section III.A.1.(a)

The proposed action would grant a partial exemption from Section III.A.1.(a) of Appendix J to 10 CFR Part 50, which requires, in part, that periodic Type A tests shall be terminated if potentially excessive leakage paths are identified which will interfere with the satisfactory completion of these tests. This section then requires that local leakage rates be measured through those paths exhibiting potentially excessive leakage and that repairs and/or adjustments be made prior to restarting the Type A test. This partial exemption would allow for a method to successfully complete the containment integrated leakage test when it is determined that excessive local leakage exists.

The proposed action is in accordance with Item 1 of the licensee's request for partial exemption dated February 17, 1993.

10 CFR Part 50, Appendix J, Section III.D.1.(a)

The proposed action would grant a partial exemption from the requirements of Section III.D.1.(a) of Appendix J to 10 CFR Part 50. This section requires that a set of three Type A tests be performed at approximately equal intervals during each 10-year service period and that the third test of each set be conducted when the plant is shut down for the 10-year plant inservice inspection (ISI). The licensee's request is for a partial exemption from the requirement to perform the third Type A test when the plant is shut down for the 10-year plant ISI.

The proposed action is in accordance with Item 2 of the licensee's request for partial exemption dated February 17, 1993.

10 CFR Part 50, Appendix J, Section III.A.5.(b)

The proposed action would grant a partial exemption from the requirement in Section III.A.5.(b) of Appendix J to 10 CFR Part 50. This requirement stipulates that for a Type A test, the measured leakage rate, L_m , be less than 75 percent of the maximum allowable leakage rate, L_a , measured at the calculated peak containment internal pressure, P_a . Under the partial exemption the acceptance criteria for the "as found" leakage rate would be the maximum allowable leakage rate, L_a , while the acceptance criteria for the "as left" leakage rate would remain at $0.75 L_a$.

The proposed action is in accordance with Item 3 of the licensee's request for partial exemption dated February 17, 1993.

10 CFR Part 50, Appendix J, Section III.B.1.(b), III.B.3, and III.D.2

The proposed action would grant a one-time partial exemption from the requirements in Sections III.B.1.(b), III.B.3, and III.D.2 of Appendix J to 10 CFR Part 50. These sections require that containment penetrations be leak rate tested at least every two years and that the leakage rate measurement be added to the combined leakage rate for all penetrations subject to Type B and C tests to verify that the total combined leakage rate is less than the acceptance criteria. The partial exemption would apply to the Inclined Fuel Transfer System (IFTS) containment penetration IMC-4 for Clinton Power Station operating cycle 5.

The proposed action is in accordance with the licensee's request for partial exemption dated April 16, 1993.

The Need for the Proposed Action

10 CFR Part 50, Appendix J, Section III.A.1.(a)

The proposed partial exemption is needed to avoid delays during refueling outages in the event that potentially excessive local leakage paths are found while conducting containment integrated leakage rate tests.

10 CFR Part 50, Appendix J, Section III.D.1.(a)

The proposed partial exemption is needed to avoid unnecessary restraints in outage scheduling. The licensee proposes to perform the three Type A tests at approximately equal intervals within each 10-year period, with the third test of each set conducted as close as practical to the end of the 10-year period. However, there would be no required connection between the Appendix J 10-year interval and the inservice inspection (ISI) 10-year interval. The Type A tests and the 10-year ISI program are independent of each other and

provide assurances of different plant characteristics. The licensee performs the ISI inspection requirements throughout the 10-year inspection interval. As a result, there is no extended outage in which the 10-year ISI examinations are performed. Consequently, the subject coupling requirement offers no benefit either to safety or to economical operation of the facility.

10 CFR Part 50, Appendix J, Section III.A.5.(b)

The proposed partial exemption is needed to avoid unnecessary Type A testing of the reactor primary containment leakage rate. Granting this partial exemption would avoid an increased testing frequency as required by Section III.6.b in the event that the "as found" leakage rate was equal to or greater than $0.75 L_a$.

10 CFR Part 50, Appendix J, Section III.B.1.(b), III.B.3, and III.D.2

The proposed partial exemption is needed as a result of the potential inability to perform a valid Type B local leak rate test (LLRT) on the two-ply bellows assembly of IFTS containment penetration 1MC-4. After reviewing the facts provided in NRC Information Notice 92-20, "Inadequate Local Leak Rate Testing," the licensee determined that due to the design and configuration of the IFTS containment penetration bellows assembly the current method for performing Type B testing on the bellows assembly may be inadequate. The licensee is evaluating a number of options to provide a valid, reliable Type B test on the subject penetration. However, due to the lead time involved in replacing the bellows assembly with a new design or developing a special test box for the penetration, it will not be possible to complete a valid Type B test of this penetration during the next refueling outage currently scheduled to begin in September 1993.

Environmental Impacts of the Proposed Action

The Commission's staff has determined that granting the proposed partial exemptions would not significantly increase the probability or amount of expected primary containment leakage and that containment integrity would, thus, be maintained.

10 CFR Part 50, Appendix J, Section III.A.1.(a)

The only differences between the proposed requirements and the current requirements of 10 CFR Part 50, Appendix J, Section III.A.1.(a) are that: (1) the potentially excessive leakage paths would be repaired and/or adjusted after completion of the Type A test rather than before the test; and (2) the Type A test leakage rate would be partially determined by calculation (i.e., adding the local leak rates after repairs and/or adjustments for those components that were isolated for excessive leakage to the overall leakage rate measured in the Type A test) rather than by direct measurement. The acceptance criteria for the "as left" containment integrated leakage rate, however, would remain the same.

10 CFR Part 50, Appendix J, Section III.D.1.(a)

The only difference between the proposed requirements and the current requirements of 10 CFR Part 50, Appendix J, Section III.D.1.(a) would be that the third Type A test for each 10-year service period would not necessarily be conducted when the plant is shut down for the 10-year plant inservice inspection. The number of required Type A tests and the periodicity of these tests would not be changed.

10 CFR Part 50, Appendix J, Section III.A.5.(b)

The only difference between the proposed requirements and the current requirements of 10 CFR Part 50, Appendix J, Section III.A.5.(b) would be that instead of a single acceptance criteria of $0.75 L_g$ for the Type A tests, there would be an "as found" acceptance criteria of L_g and an "as left" acceptance criteria of $0.75 L_g$. The acceptance criteria in Appendix J of $0.75 L_g$ was established in order to provide a margin of 25 percent to account for possible deterioration of the reactor primary containment leak-tightness during the time between the periodic Type A tests. There is no need to account for deterioration at the end of a Type A test interval since the "as found" leakage corresponds to the actual condition of the containment at the end of the test interval. The proposal would continue to maintain the requirement that the reactor primary containment (i.e., the "as left" condition) leakage rate be re-established to less than $0.75 L_g$ prior to the restart of the plant.

10 CFR Part 50, Appendix J, Section III.B.1.(b), III.B.3, and III.D.2

Under this proposal, the requirements of 10 CFR Part 50, Appendix J, Section III.B.1.(b), III.B.3, and III.D.2, to complete a valid Type B test of IFTS penetration IMC-4, would not be met until the fifth refueling outage. Until an adequate modification can be made to allow a valid Type B test to be performed on this penetration, the licensee would continue to test the bellows assembly as previously tested. While it is recognized that these results may be questionable, they reflect the relative leakage rate of the penetration. In addition, the licensee would perform a thorough examination of the outer bellows surface and the integrity of the bellows will be confirmed as part of the integrated leak rate test to be performed during the outage.

Consequently, the probability of accidents would not be increased, nor would the post-accident radiological releases be greater than previously determined. Neither would the proposed partial exemptions otherwise affect radiological plant effluents. Therefore, the Commission's staff concludes that there are no significant radiological environmental impacts associated with the proposed partial exemptions.

With regard to potential nonradiological impacts, the proposed partial exemptions involve changes to surveillance and testing requirements. It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, the Commission's staff concludes that there are no significant nonradiological environmental impacts associated with the proposed partial exemptions.

Alternative to the Proposed Action

As an alternative to the proposed action, the staff considered denial of the proposed action. Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources

This action does not involve the use of any resources not previously considered in connection with the Nuclear Regulatory Commission's Final Environmental Statement, dated May 1982, related to the operation of the Clinton Power Station, Unit 1.

Agencies and Persons Consulted

The staff consulted with the State of Illinois regarding the environmental impact of the proposed action. The State had no comment.

FINDING OF NO SIGNIFICANT IMPACT

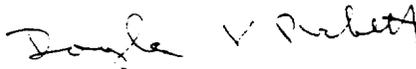
The Commission has determined not to prepare an environmental impact statement for the proposed partial exemptions.

Based upon the foregoing environmental assessment, we conclude that the proposed action will not have a significant effect on the quality of the human environment.

For further details with respect to this action, see the requests for partial exemptions dated February 17 and April 16, 1993, which are available for public inspection at the Commission's Public Document Room, 2120 L Street, NW., Washington DC and at the Vespasian Warner Public Library, 120 West Johnson Street, Clinton, Illinois 61727.

Dated at Rockville, Maryland, this 24th day of May 1993.

FOR THE NUCLEAR REGULATORY COMMISSION



Douglas V. Pickett, Acting Director
Project Directorate III-2
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation