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UNITED STATES NUCLEAR REGULATORY COMMISSION

ILLINOIS POWER COMPANY, ET AL.

CLINTON POWER STATION, UNIT NO. 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 temporary exemption from the requirements of Appendix J to 10 CFR Part 50 to Illinois Power Company*, (the licensee), for the Clinton Power Station, Unit No. 1, located in Harp Township, DeWitt County, Illinois.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action

The proposed action would grant a temporary exemption from requirements contained in Sections III.B.3 and III.C.3 of Appendix J to 10 CFR Part 50, which states, in part, that "...the combined leakage rate for all [containment] penetrations and valves subject to Type B and C tests shall be less than 0.60 La."

The proposed action is in accordance with the licensee's request for a temporary exemption dated January 18, 1991.

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*Illinois Power Company is authorized to act as agent for Soyland Power Cooperative, Inc. and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

The Need for the Proposed Action

The proposed exemption is needed because the requirements of Sections III.B.3 and III.C.3 of Appendix J to 10 CFR Part 50 would not be satisfactorily met if the current air leakage of feedwater containment isolation valves 1B21-F032A(B) were to be included in the overall Integrated Leak Rate Test (ILRT) total.

The two feedwater containment penetrations for which this exemption is needed consist of two check valves and a remote-manual motor-operated gate valve (gate valve) in series.

The situation was identified after performing extensive refurbishing on the outboard feedwater containment isolation check valves (1B21-F032A(B)) during the current refueling outage. Although the F032A(B) check valves passed a 1000 psig water test performed in accordance with Section XI of the ASME Code, they failed an air test pursuant to Appendix J.

In a discussion with the licensee on January 8, 1991, the staff indicated that this penetration leakage should be calculated utilizing the check valve with the highest leakage rate. Prior to the January 8, 1991 discussion, the licensee calculated the feedwater penetration leakage based on the valve with the second highest leakage. Utilizing this methodology, the licensee took credit for the shut gate valve and assumed the valve with the lowest leakage failed to open. A conservative calculation of penetration leakage would include the two boundaries left for containment isolation. This would result in a penetration leakage calculation equal to the leakage of the valve with the lowest individual leakage of the two remaining boundaries. The staff indicated to the licensee that the gate valves should not be counted as part of the containment boundary, at least for the time it is open, because they do not respond to an automatic containment isolation signal.

The design of the 1B21-F032A(B) check valve differs from the design of the inboard check valve (1B21-F010A(B)), in that the F032A(B) check valve utilizes a tilting disc and hard seat while the F010A(B) check valve utilizes a soft seat design. The soft seat design of the F010A(B) check valves makes it easier for these valves to pass the Appendix J air test. The licensee stated in its request that a permanent and effective solution (most likely involving changes to the current design) is required to consistently obtain acceptable air leakage results for the F032A(B) check valves. The licensee has also indicated that several months would be required to identify and evaluate the alternatives, adopt the best alternative, procure the required materials, and implement the needed changes.

Based on the above discussion and the licensee's commitment to address the F032A(B) check valve air leakage problem adequately, the staff has determined that there is sufficient need for the proposed action.

Environmental Impacts of the Proposed Action

The Commission's staff has determined that granting the proposed exemption would not significantly increase the probability or amount of expected containment leakage and that containment integrity would thus be maintained. 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 exemption otherwise affect radiological plant effuents. Therefore, the Commission's staff concludes that there are no significant radiological environmental impacts associated with the proposed exenption.

With regard to potential nonradiological impacts, the proposed exemption involves a change to surveillance and testing requirements.

It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, the Commission concludes that there are no significant nonradiological environmental impacts associated with the proposed exemption.

Alternative to the Proposed Action

Since the Commission concluded that there are no significant environmental impacts associated with the proposed action, any alternatives would have either no or greater environmental impact.

The principal alternative would be to deny the requested exemption This would not reduce the environmental impacts attributed to the facility but would result in a prolonged and costly extension to the current refueling outage.

Alternative Use of Resources

This action does not involve the use of any resources not previously considered in the "Final Environmental Statement Related to the Operation of Clinton Power Station, Unit No. 1," dated May 1982.

Agencies and Persons Consulted

The NRC staff reviewed the licensee's request and did not consult other agencies or persons.

FINDING OF NO SIGNIFICANT IMPACT

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

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 application for exemption dated January 18, 1991, which is available for public inspection at the Commission's Public Document Room, 2120 L Street, N.W., Washington, D.C. 20555 and at the Vespasian Warner Public Library, 120 West Johnson Street, Clinton, Illinois 61727.

Dated at Rockville, Maryland, this day of 1991.

FOR THE NUCLEAR REGULATORY COMMISSION

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