Illinois Power Company

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500 SOUTH 27TH STREET, P. O. BOX 511, DECATUR, ILLINOIS 62525-1805

Docket Number 50-461

March 1, 1983

Director of Nuclear Reactor Regulation
Attention: Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Schwencer,

References: (1) Meeting between IP and the NRC, January 13, 1983; SER Outstanding Issue #10a "Containment Purge."

(2) IP Letter U-0592 from G. E. Wuller to A. Schwencer, January 17, 1982; "Containment Continuous Vent & Purge System."

(3) Meeting between IP and NRC, February 17, 1983; "Status of CPS SER Outstanding & Confirmatory Issues."

Clinton Power Station Unit #1
Containment Leakage Testing
(SER Outstanding Issue #10c)

The purpose of this letter is to provide the NRC Staff with clarification regarding Illinois Power Company's (IP) commitments (as discussed in the references) to perform leakage tests of the valves on vent and drain lines located between valves performing the containment isolation function. In addition, supplemental information regarding leakage testing of the containment vent/purge valves is provided.

Valves on vent & drain lines between containment inboard and outboard isolation valves will be air or water tested at intervals no greater than every 24 months consistent with the Type C Leak Testing requirements of 10CFR50 Appendix J and the provisions of ANSI N56.8 - 1982. Depending on the test rig setup, some valves will be tested in the forward direction while others will be tested in the reverse direction. The measured leakage resulting from these tests will be summed with the total Type C leakage to ensure that the CPS Technical Specification requirement is met. All valves on such containment vent & drain lines will be identified in FSAR Table 6.2-47 along with the appropriate information regarding test media, test directions, etc. This material will be included in the May, 1983 FSAR Amendment.

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Leakage integrity tests of the isolation valves in the containment vent/purge lines shall be conducted at least once every 6 months for all vent/purge valves performing the isolation function (this includes the 36" and 12" vent/purge valves). The purpose of these tests will be to identify excessive degradation of the valve seating material. These tests will be performed in addition to the quantitative Type C isolation valve tests required in 10CFR50, Appendix J.

For the 12" vent/purge line it is IP's intention to provide valves that do not utilize resilient seating materials. Such materials have been the focus of numerous Licensee Event Reports regarding resilient seal degradation with valve use. Several vendors that supply valves with conically tapered metal seats and seals are being considered. These valves will be qualified to the NRC Vent/Purge valve operability criteria (LOCA/seismic loads). It is IP's position that, if metal-seated valves meeting these criteria can be provided for the 12" line, more frequent valve leakage testing is unnecessary. If valves containing resilient-type material are utilized for the 12" line, then tests will be performed on those valves on a three-month frequency.

The 36" vent/purge isolation valves used at CPS utilize resilient sealing material only in the backing O-ring. The primary sealing ring is made of an inert, low-friction, wear-resistant elastomer, called TEFZEL. Such material has not been shown to exhibit the rapid deterioration properties of the resilient materials and will not be affected by atmospheric temperature changes as are the more resilient materials. In addition, the 36" valves will not be opened during Operating Conditions 1, 2 and 3 unless justified to supplement the 12" low volume purge system (not to exceed 500 hrs/year). Once operating experience at CPS is obtained, if it is required to operate these valves more than once every three months during Operating Conditions 1, 2 and 3, then these valves will be tested for leakage every 3 months.

These containment leakage testing requirements will be incorporated in the CPS Technical Specifications.

IP believes that the above information and commitments are adequate to close CPS-SER Outstanding Issue #10c in the next SER Supplement. Please let us know at your earliest convenience if you have any questions or concerns.

Sincerely,

G. E. Wuller

G. E. Wuller
Supervisor - Licensing
Nuclear Station Engineering

TLR/jmm

cc: H. Abelson, NRC Clinton Project Manager
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