

ILLINOIS POWER COMPANY



U-0592

L30-83(01-17)-6

500 SOUTH 27TH STREET, DECATUR, ILLINOIS 62525

January 17, 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) IP Letter U-0588, G. E. Wuller to A. Schwencer
December 17, 1982, "Containment Continuous
Vent & Purge System"

(2) Meeting between IP and NRC, January 13, 1983
SER Outstanding Issue #10a "Containment Purge"

Clinton Power Station Unit 1
Docket No. 50-461
Containment Continuous Vent & Purge System

The purpose of this letter is to document the agreements reached at our meeting with the Staff on January 13, 1983 with regards to CPS Safety Evaluation Report (CPS-SER) Outstanding Issue #10a on "Containment Purge". A summary of IP's proposal for redesign of the CPS containment ventilation system and a schedule of IP action to meet the commitments made at the January 13 meeting is included.

Our proposal, as discussed at the January 13 meeting, for the redesign of the Containment Ventilation System is as follows:

1. A low-volume purge system will be utilized on a continuous basis during Reactor Operating Modes 1, 2, and 3. This system will provide 8,000 cfm flow through one 12-inch line with dual fast-acting isolation valves on the exhaust and supply penetrations.

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2. The existing high-volume purge system will be utilized on an intermittent basis, not to exceed 500 hours/year, during Reactor Operating Modes 1, 2, and 3. This system will provide 30,000 cfm flow through one 36-inch line with dual fastacting isolation valves on the exhaust and supply penetrations. Use of this system during normal reactor operation will be limited to only those conditions where the continuous purge system is not capable of maintaining overall containment air quality or acceptable radionuclide airborne levels (less than $\frac{1}{2}$ MPC in the containment general access areas). In addition, unlimited use of this high-volume purge system will be allowed during Reactor Operating Modes 4 and 5 (cold shutdown and refueling operations).
3. At no time shall more than one supply line and one exhaust line be employed for containment purging. This will be enforced by administrative controls that will restrict operation of the 30,000 cfm system while the 8,000 cfm system is being used, and vice versa.
4. Containment purging will not be utilized for temperature/humidity control during Operating Modes 1, 2 and 3. Additional local (recirculation type) coolers will be provided for those containment equipment cubicles where presently not installed. Operation of these coolers will be independent of the containment vent/purge system.
5. Leakage integrity tests of the isolation valves in the containment vent/purge lines shall be conducted at least once every six months for all valves performing the isolation function. If valves containing resilient-type material are utilized for the 12-inch line, then tests will be performed on those valves on a three-month frequency. 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. Additional information justifying the proposed frequency for vent/purge valve leakage testing will be provided once a vendor for the 12-inch valves has been selected.

6. A valve operability analysis of the 12-inch valves to be used in the 8,000 cfm system will be submitted to NRC. This analysis will provide assurance that the 12-inch isolation valves associated with the 8,000 cfm containment purge system will close within five seconds under combined post-LOCA and seismic loads. Once IP has selected a valve vendor to supply these 12-inch valves for CPS, a schedule will be developed for submittal of this analysis to the NRC Staff.

In addition to the IP proposal outlined above, several additional commitments requested by the NRC were discussed at the meeting with the Staff on January 13. A discussion of these commitments and our schedule for action follow:

1. CPS Containment Purge Operational Data Gathering Program

IP's evaluation concludes that continuous use of the 8,000 cfm containment purge system will be required to meet ALARA considerations and the limits of 10CFR20. This evaluation is based on expected leakages and design-basis source terms. With plant operating experience a more accurate assessment of coolant leakage and containment airborne radioactivity can be made. IP will contact other MK III containment owners for the purpose of defining the data collection effort necessary to justify the need for containment purging. The program defining what data will be collected and how these data will be analyzed will be submitted to the NRC. A schedule for submittal of this program will be considerate of the schedule for full power operation of the leading BWR/6 Mark III project participating in this effort. Prior to the startup following the first regularly scheduled refueling outage, IP will utilize the above program to evaluate--based upon CPS operating experience information--the need for continuous containment purge. A summary of that evaluation's findings will be provided to the Staff prior to returning to normal power operations.

2. CPS Containment Access Management Program

The CPS Containment Occupancy Requirements are based upon existing technical specification requirements and anticipated operational surveillance/maintenance activities for the CPS Mark III containment. IP will develop a "Containment Access Management Program" so that access time requirements will be minimized where appropriate. Consideration of the total spectrum of activities to be performed, as well as when and how those activities can be accomplished, will be included. Submittal of this program will be six months prior to fuel load.

3. Interim Guideline Criteria for CPS Containment Purge Operation

IP believes that unrestricted containment access will enhance the overall safe operation of the plant and provide for greater plant availability. If continuous purge is not required to maintain this accessibility, then guidelines must be established that will alleviate the continuous operation of the purge system. IP will develop appropriate interim guideline criteria that will establish provisions for a reduction in the use of the continuous purge system. These criteria will consider limitations on airborne activity levels, ALARA, and overall containment air quality in determining when the continuous purge system is not needed. Submittal of this program will be six months prior to fuel load.

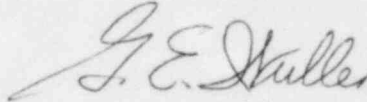
Detailed redesign and operational information on the CPS Containment Purge system will be provided as an Amendment to the Final Safety Analysis Report (FSAR) by July, 1983, to allow adequate time for completion of design and procurement activities.

It is IP's understanding that the above information and commitments are adequate to change the status of the "Containment Purge" Issue (#10a) from Outstanding to Confirmatory in the next SER Supplement. Resolution of this issue is, of course, contingent upon NRC Staff acceptance of the final FSAR Amendment material and the commitment program described above.

U-0592
L30-83(01-17)-6
January 17, 1983
Page 5

Please let us know at your earliest convenience if the above information is adequate.

Sincerely,

A handwritten signature in cursive script, appearing to read "G. E. Wuller".

G. E. Wuller
Supervisor-Licensing
Nuclear Station Engineering

TLR/lt

cc: H. Abelson, NRC Clinton Project Manager
H. H. Livermore, NRC Resident Inspector
Illinois Department of Nuclear Safety
J. A. Kudrick, NRC CSB
M. Lamastra, NRC RAB