

U-600173
L30- 85(07-15)-L
1A.120

ILLINOIS POWER COMPANY



CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

July 15, 1985

Docket No. 50-461

Director of Nuclear Reactor Regulation
Attn: Mr. W. R. Butler, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Clinton Power Station
Containment Vent & Purge Valve Operability
SER Confirmatory Issue #69

Dear Mr. Butler:

Illinois Power (IP) Letter U-0571, dated October 22, 1982, provided the NRC Staff with a detailed analysis of the Clinton Power Station (CPS) Containment Vent & Purge (V&P) valves supplied by POSI-SEAL Inc. (i.e., the 10", 24", and 36" valves of the Containment Building Ventilation System). This analysis, performed by POSI-SEAL, determined the predicted loads (valve component stresses) experienced by these valves under postulated worst-case combined Loss of Coolant Accident (LOCA) and seismic conditions.

In an NRC letter, from A. Schwencer to G. E. Wuller, dated July 20, 1983, the Staff provided IP with the results of its review of the POSI-SEAL analysis. The basic NRC concern regarded the methodology used to convert valve lift and drag torque coefficients obtained from water tests into the corresponding coefficients for air. For valve opening angles of about 60° or less, where the pressure drops are much higher, the torques (hydrodynamic or aerodynamic) are generally low such that they do not generate high stresses in any critical valve components. Based upon this concern, IP Letter U-0678, dated November 17, 1983, concluded that the most suitable solution for CPS is to limit the 24" and 36" valve opening angles to 50° through the use of mechanical stops on the valve actuators. The use of mechanical stops is not required for the 10" valves in the Containment Building Ventilation System. This position is consistent with the suggested resolution contained in the referenced NRC letter. The conditions under which these mechanical stops must be in place and the usage of the high-volume purge system were identified in IP Letter U-0678.

The body-to-bracket bolt material for the 36" V&P valves will be changed to the higher stress allowable material (A354 GR BD), as recommended by the referenced POSI-SEAL report. In addition, the installed orientation of all 10", 24", and 36" V&P valves will conform to the preferred orientation, as recommended by POSI-SEAL. These commitments were also made in IP Letter U-0678.

8507170171 850715
PDR ADOCK 05000461
E PDR

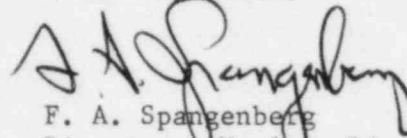
3001
1/0

The mechanical stops on the 24" and 36" valves and the higher strength body-to-bracket bolt material will be installed prior to fuel load. Additionally, the manufacturer's preferred orientations of the valve installations will be confirmed prior to fuel load. It is our understanding, based on telephone conversations with Mr. Byron Siegel (NRC Clinton Licensing Project Manager) that these commitments are adequate to close the issue of V&P valve operability, for the 10", 24" and 36" valves, in Safety Evaluation Report Supplement #5.

As the Staff is already aware, the operability report for the new 12" V&P valves (supplied by CLOW Corporation) that are part of the Containment Continuous Purge System is currently under preparation. Testing of these valves is not yet complete by CLOW. The 12" valve operability report is scheduled for submittal to the NRC by August 2, 1985.

If you should have any questions on this issue, please contact me.

Sincerely yours,



F. A. Spangenberg
Director - Nuclear Licensing
and Configuration
Nuclear Station Engineering

TLR/lab

cc: B. L. Siegel, NRC Clinton Licensing Project Manager
NRC Resident Office
Regional Administrator, Region III, USNRC
Illinois Department of Nuclear Safety