DAIRYLAND POWER COOPERATIVE · P.O. BOX 817 · 2615 EAST AV. SOUTH · LA CROSSE, WISCONSIN 54601
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August 19, 1980

In reply, please refer to LAC-7095

DOCKET NO. 50-409

Director of Nuclear Reactor Regulation
ATTN: Mr. Dennis M. Crutchfield, Chief
Operating Reactors Branch No. 5
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

SUBJECT: DAIRYLAND POWER COOPERATIVE
LA CROSSE BOILING WATER REACTOR (LACBWR)
PROVISIONAL OPERATING LICENSE NO. DPR-45
ADDITIONAL INFORMATION TO FACILITATE
10 CFR 50 APPENDIX J REVIEW

Reference: (1) NRC Letter, Crutchfield to Linder, dated May 19, 1980.
(2) DPC Letter, LAC-7057, Linder to Crutchfield, dated July 28, 1980.

Gentlemen:

Your request for additional information (Reference 1) required justification for performing Type C leakage testing using water rather than air as a medium for testing. Justification that the affected systems will remain intact and liquid-filled following a LOCA for two of the isolation valves was included in Reference 2. Justification for testing two other isolation valves with water is included as Enclosure 1 to this letter. The remaining valves discussed in Reference 1 will be tested in the future using air as the medium.

If there are further questions, please contact us.

Very truly yours,

DAIRYLAND POWER COOPERATIVE

Frank Linder

Frank Linder, General Manager

FL:LSC:af
Enclosure 1

cc: J. Keppler, Reg. Dir., NRC-DRO III

DECAY HEAT STARTUP WATER REMOVAL

Valve No. 56-25-001

(Reference 1, Item 5, of Paragraph 2.1)

Your letter states that:

Nevertheless, hydrostatic testing of these valves may be found acceptable because there are some systems which are designed to remain intact and liquid-filled following a postulated loss-of-coolant-accident. For these systems, testing with water as a medium is more appropriate than testing with air or nitrogen since it more closely approximates the post-accident environment. If hydrostatic testing of these systems is to be employed, justification must be provided that the available fluid inventory is sufficient to maintain a water seal on the isolation valves during and following an accident based on the water leakage-rate limit of the test."

The decay heat system is designed to remain intact and water-filled following a postulated loss-of-coolant accident, therefore, testing with water as a medium is more appropriate than testing with air or nitrogen since it more closely approximates the post accident environment.

The acceptance criteria on the Type C leakage test is 0.62 gallons per hour. The water supply required to compensate for the acceptable leakage for 30 days following an accident is 446 gallons. Primary coolant contained in the reactor vessel maintains a positive head of water on the decay heat startup water removal line due to the difference in elevation between the reactor vessel and the line. The decay heat system piping leading from the Forced Circulation Pump suction line to the Decay Heat Startup Water Removal Valve holds approximately 750 gallons of water. Therefore, even if the reactor vessel water level fell below the Forced Circulation outlet nozzle during the transient, the available fluid inventory, considering all available sources, is sufficient to maintain a water seal on this isolation valve during and following an accident. We have concluded that hydrostatic testing of the valve is the proper method.

In addition, IE Information Notice 80-20, "Loss of Decay Heat Removal Capability at Davis-Besse Unit 1 While in a Refueling Mode", cautions against losing decay heat removal capability. Since the decay heat system at LACBWR provides the primary method of removing decay heat from the reactor, it would not be beneficial to partially drain the system in order to test with air.

ENCLOSURE 1

PRIMARY PURIFICATION RESIN SLUICE

Valves Nos. 54-24-019, 54-24-020, 54-24-021, and 54-24-022

(Reference 1, Item 7, of Paragraph 2.1)

The Primary Purification System would be utilized in a post-accident situation to remove dissolved and suspended solids and obtain optimum reactor water quality.

As the system is designed to remain intact and water-filled following a postulated loss-of-coolant accident, testing with water as the medium is more appropriate than testing with air or nitrogen since it more closely approximates the post-accident environment.

The acceptance criteria on the Type C leakage test is 0.62 gallons per hour. Water enters the Primary Purification System from the bottom of the reactor vessel. The resin sluice line isolation valves are at low points in the system, therefore, the reactor vessel maintains a hydrostatic head of water on the system and a water seal on the isolation valves and hydrostatic testing of the valves is the proper method.