



Nebraska Public Power District

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February 26, 1985

50-298

Director of Nuclear Reactor Regulation
Operating Reactors Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. Domenic B. Vassallo, Chief

Dear Mr. Vassallo:

Subject: II.K.3.28, "Qualification of ADS Accumulators",
Response to NRC Request for Additional Information

- Reference: 1) Letter from J. M. Pilant to D. G. Eisenhut Dated
December 28, 1981, "Post TMI-Requirements/
NUREG 0737"
- 2) Letter from J. M. Pilant to D. B. Vassallo Dated
August 26, 1983, II.K.3.28, "Qualification of ADS
Accumulators"
- 3) Letter from J. M. Pilant to D. G. Eisenhut Dated
July 26, 1984, (Revised September 21, 1984)
"Response to Request for Additional Information
Qualification of ADS Accumulators Per
10CFR50.54(F)"
- 4) Safety Evaluation of the Cooper Nuclear Station,
Issued February 14, 1973

In the above References 1, 2, and 3, the District provided
information relating to the closure of the subject TMI
Item II.K.3.28. In a conference call with the staff January 30,
1985, it was requested that two remaining issues be addressed.
This letter is provided to respond to that request.

Issue 1: ADS Accumulator Gas Supply

The District's response of Reference 3 conservatively
assessed that the accumulator nitrogen supply would be
sufficient for 1.6 hours assuming a combined seismic and
LOCA event. After discussion with the staff, this
calculation was again performed assuming only a seismic
event and realistic average leakage rates based upon
previous surveillance tests at CNS. It was determined that
the two ADS valves required for controlled depressurization
per Appendix G of the USAR could be expected to be
available on the order of 40 hours after the seismic event
isolated the seismically-qualified accumulators. However, as
discussed clearly in Reference 4, residual heat may be

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removed from the core in nonaccident situations by the Class I seismic RCIC system and the three modes of RHR. The relief valves may actuate to remove core decay heat through blowdown of steam to the torus, but this does not require the ADS N₂ supply. CNS also has a steam condensing mode of RHR where the RHR heat exchangers are used to condense reactor steam withdrawn through the HPCI steam line. Shortly after shutdown both RHR heat exchangers can be used to handle essentially all of the decay heat and after approximately two hours, one heat exchanger is adequate. Again there is no requirement for the ADS system.

The ECCS subsystems and ADS system at CNS provide emergency core cooling during postulated accident conditions where it is assumed that mechanical failures occur in the primary coolant system piping resulting in a LOCA. The ADS system is only required to reduce primary system pressure in the event the HPCI system fails to function properly during a small break LOCA. Given a seismic or nonseismic event, all of the systems mentioned above should be available to bring the plant to safe shutdown without the need for the ADS system long term.

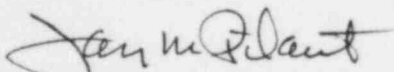
For any nonseismic event in the long term (100 days), CNS could replenish the outdoor liquid N₂ tank if required. This tank would be accessible during a design basis accident. Long-term cooling can be accomplished without the need for ADS valve actuation out to 100 days at CNS.

Issue 2: Verification of Class I Seismic ADS Components

Our response of Reference 3 stated that documentation is not available for seismic qualification of the check valves and pressure switches associated with the ADS accumulators. The District has since obtained documentation for the pressure switches and will replace the check valves if required per our commitment in Reference 3.

It is believed that this response adequately addresses the questions raised by the staff.

Sincerely,



Jay M. Pilant
Technical Staff Manager
Nuclear Power Group

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