

Nebraska Public Power District

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December 17, 1982

Mr. Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Proposed Changes to Technical Specifications-
"Safety Relief Valve (S/RV) Low-Low Set (LLS) System and Lower
Main Steam Isolation Valve (MSIV) Water Level Trip"
Cooper Nuclear Station
NRC Docket No. 50-298, DPR-46

- Reference:
1. Mark I Containment Program Plant Unique Load Definition Cooper Nuclear Station," NEDO-24573, Rev. 1, June 1981, General Electric Company.
 2. General Electric Design Issue Memo (No. 131, dated 9-12-74).
 3. Multiplant ACTION No. D-01, October 12, 1982, Nuclear Regulatory Commission Internal Memo from B. L. Siegel.

Dear Sir:

The evaluation of S/RV load on Cooper's Mark I Containment (Ref. 1) has led to a concern for containment integrity. Excessive load cases (cases C3.1, C3.2 and C3.3), resulting from subsequent S/RV actuations, have been identified for Cooper. To mitigate the excessive loads, a 100 psi low-low set relief valve logic is proposed. For additional safety margin, a lowering of the MSIV low reactor water level isolation set point from the current level 2 (≥ -37 inches) to level 1 (≥ -145.5 inches) is proposed. The lowering of the set point will also reduce S/RV challenges as recommended in NUREG-0737, Item II.K.3.16.

change: E The LLS system consists of S/RV actuation monitors, Nuclear Boiler pressure
PDR 1 NP instrumentation, a cabinet to house the LLS logic relays, solenoid valves and
LPDR 1 NP accumulators. The S/RV actuation monitors are tail pipe pressure switches
NSIC 1 NP which indicate any S/RV opening. The Nuclear Boiler instrumentation
NTIS 1 NP consists of existing instruments which can be used by removing an
unnecessary isolation function (Ref. 2). The LLS logic is designed with the
same redundancy and single failure criteria as the Automatic Depressurization

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System (ADS) (i.e., no single electrical failure will: (1) prevent any LLS valve from opening, (2) cause inadvertent seal-in of LLS logic, or (3) cause more than one valve to inadvertently open or stick open).

Both of these modifications are similar to those originated for the BWR/6 design, they are compatible with normal plant operation and other safety systems and they offer numerous advantages to improve plant safety.

To summarize, the design change:

1. Adds a 100 psi LLS relief logic for the two S/RV's.
- *2. Reassigns the 1000 psig MSIV closure scram bypass pressure switches to LLS relief logic. Reference 2 (Enclosure 1) was issued to remove this 1000 psig scram. This function is not necessary since the high-pressure scram presently occurs at 1045 psig.
3. Adds an air accumulator and associated pneumatic components to S/RV D and F.
- *4. Lowers the MSIV water level trip from level 2 (\geq -37 inches) to level (\geq -145.5 inches).

*Technical Specification Changes (Enclosure 4) are submitted in accordance with 10CFR50.

As discussed in Reference 3, Cooper has previously proposed to the staff the implementation of the low-low set logic and lower MSIV water level trip. Therefore, NPPD is respectfully requesting approval of the design and enclosed Technical Specification changes (Enclosure 4) so that it may be installed in the 1983 refueling outage currently scheduled for May, 1983. Prior NRC approval is required before the modifications can be made. NPPD will forward additional Cooper plant specific licensing information at a later date which will fully address the basis for the LLS relief set points. The Basis section for Specification 3.2 "Protective Instrumentation" is being reformatted for ease of utilization.

Also enclosed are one copy of "Low-Low Set Logic and Lower MSIV Water Level Trip for BWRs with Mark I Containment", NEDE 22223, September 1982, General Electric Company (Enclosure 2) and one copy of G.E. Drawing 944E689, Revision 1, "Low-Low Set" (Preliminary Electrical Diagram, Enclosure 3). NEDE 22223 contains information which the General Electric Company customarily maintains in confidence and withholds from public disclosure. The information has been handled and classified as proprietary to General Electric. As indicated in the attached affidavit, (Enclosure 5) we hereby request that NEDE-22223 be withheld from public disclosure in accordance with the provisions of 10CFR2.790.

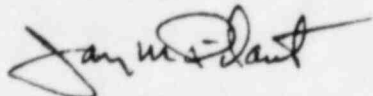
These changes have been reviewed by the necessary Safety Review Committees and payment for a Class III amendment in the amount of \$4,000 is enclosed.

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If additional clarification is necessary regarding the enclosed information, please do not hesitate to call me.

In addition to three signed originals, 37 copies are also submitted for your use.

Sincerely,

A handwritten signature in dark ink, appearing to read "J. M. Pilant", with a stylized flourish at the end.

J. M. Pilant
Division Manager of
Licensing & Quality Assurance

JMP/EMM/JDW:emz17/9
Enclosures