



## Nebraska Public Power District

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May 6, 1982

U.S. Nuclear Regulatory Commission  
Attention: Mr. Domenic B. Vassallo, Chief  
Operating Reactors Branch No. 2  
Division of Licensing  
Washington, DC 20555

Subject: Single Loop Operation -  
Response to NRC Questions



Dear Mr. Vassallo:

Reference: 1) Letter from J. M. Pilant to T. A. Ippolito  
dated August 5, 1980, "Change to Appendix A  
Technical Specifications - Single Loop Operation"

The District submitted Proposed Technical Specifications for Single Loop Operation with Reference 1. Since that time, there have been numerous discussions on this issue at the request of the Staff. Per the Staff's request, attached are responses to four questions relating to Single Loop Operation.

Also enclosed are updated Technical Specification pages from our August 5, 1980 submittal which incorporate all recent license amendments and Staff requests.

The District once again respectfully requests expeditious resolution of this issue so that future Emergency Technical Specification changes will not be necessary.

Sincerely,

Jay M. Pilant  
Division Manager of Licensing  
and Quality Assurance

JMP:JDW:cmk  
Enclosure

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NRC QUESTIONS REGARDING COOPER NUCLEAR STATION  
TECHNICAL SPECIFICATION CHANGE FOR SINGLE LOOP OPERATION

Question 1

Describe how the change from normal two recirculation cooling loop operation to one loop operations would be accomplished, with what physical and administrative controls, and while complying with branch technical position EICSB 12 regarding multiple setpoints and their control, and with IEEE STD. 279-4.15.

Response to Question 1

The change from two loop operation to one loop operation is accomplished by one pump either tripping automatically or by tripping it manually. If a pump is tripped manually, the following steps are performed:

- a. Place the controls of both pumps on local manual.
- b. Reduce the speed of the operating pump to be removed to minimum and increase the speed of the other pump as required to hold the desired power level (less than 50 percent power when the NRC approves Technical Specifications).
- c. Close the pump discharge valve.
- d. Trip the pump.
- e. When the MG set field breaker opens, close the pump discharge bypass valve.
- f. Leave the reactor equipment cooling (REC) water outlet valve on the motor bearing and mechanical seal coolers throttled open.
- g. Throttle or close the REC to the MG set fluid drive oil cooler to maintain at least 110°F oil temperature. Leave the oil pump running.

If a pump trips automatically, steps 1.b, 1.c, 1.e, 1.f and 1.g would be accomplished as appropriate. The procedures encompassing the above steps have been utilized at CNS since plant startup in 1974. Operations personnel have utilized these procedures a number of times. Thus, there are no new unfamiliar procedures that must be utilized to change from two loop operation to one loop operation.

The District is unsure what the staff's concerns are regarding multiple setpoints; however, there are no setpoints that must be changed to go from two loop operation to one loop operation. The capability is designed into the BWR and does not require any temporary system changes to accomplish.

#### Question 2

Describe changes made to the flow computer to automatically account for magnitude and sense change for reverse flow in the idle loop jet pumps during single loop operations.

#### Response to Question 2

Since there is not a flow computer per se, it is not clear what the staff is seeking regarding the request for a description of the changes that must be made to that flow computer to automatically account for magnitude and sense change for reverse flow in the idle loop jet pumps during single loop operations. The flow hardware installed at CNS does, however, accomplish this function automatically. If one pump trips, all flow through the jet pumps in that loop is assumed to be reverse flow and is subtracted from the flow that is measured through the active jet pumps. This is accomplished automatically by the flow hardware and requires no changes by plant personnel. Thus, the total core flow indication available in the control room is automatically correct for both one and two loop operation without any changes.

#### Question 3

Is there a requirement for the recirculation flow equalizer valves to be closed and tagged prior to commencing single recirculation loop operation as stated in NEDO-24258 Page 1-1/1-2 and how is this requirement ensured in the technical specification change?

#### Response to Question 3

CNS does not have flow equalizer valves.

#### Question 4

Where set point adjustments for single loop operation are required, is sufficient range available on the adjustment mechanisms to keep the new settings within the stable operating portion of the adjusting device?

#### Response to Question 4

There are no setpoint adjustments required at CNS for single loop operation.