

CONSUMERS POWER COMPANY  
Docket 50-255  
Request for Change to the Technical Specifications  
License DPR-20

For the reasons hereinafter set forth, it is requested that the Technical Specifications contained in the Provisional Operating License DPR-20, Docket 50-255, issued to Consumers Power Company on October 16, 1972, for the Palisades Plant be changed as described in Section I below:

I. Changes

- A. Specification 3.1.2, Figure 3-1 is completely revised to reflect new heatup limits.
- B. Specification 3.1.2, Figure 3-2 is completely revised to reflect new cooldown limits.
- C. Specification 3.1.2, Figure 3-3 is completely revised to reflect new inservice hydrostatic test limits.
- D. Specification 3.1.2.e(2), Change to read as follows:

... "For the purposes of determining fluence at the reactor vessel beltline until a fluence of  $1.3 \times 10^{19}$  nvt is realized at the inner vessel wall at the beltline region, the following basis is established:  $5.9 \times 10^{19}$  nvt calculated at the reactor vessel beltline for 2540 MW<sub>t</sub> for 40 years at an 80% level factor. This conversion has resulted in a correlation of  $1.989 \times 10^{12}$  nvt per 1 MW<sub>t</sub>."

- E. Specification 3.1.2.e(3), change to read as follows:

The limit lines in Figures 3-1, 3-2 and 3-3 are based on the requirements of Reference 9, Paragraph IV.A.2 and IV.A.3. These lines reflect a preservice hydrostatic test pressure of 2400 psig and a vessel flange material reference temperature of 60°F."

- F. Specification 3.1.2 Basis, change the second paragraph to read as follows:

... NDTT of 10°F or less. "The vessel weld has the highest RT<sub>NDT</sub> of plate, weld and HAZ materials at the fluence to which the Figures 3-1, 3-2 and 3-3 apply. (10) The unirradiated RT<sub>NDT</sub> has been determined to be -56°F. (11) An RT<sub>NDT</sub> of -56°F is used as an unirradiated value to which irradiation effects are added." In addition ...

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- G. Specification 3.1.2 Basis, change the fourth paragraph to read as follows:

"The maximum integrated fast neutron ( $E > 1\text{MeV}$ ) exposure of the reactor vessel is computed to be  $5.9 \times 10^{19}$  nvt for 40 years' operation at 2540 MW<sub>t</sub> and 80% local factor."

- H. Specifications 3.1.2 Basis, change the ninth paragraph to read as follows:

"The revised pressure-temperature limits are applicable to reactor vessel inner wall fluences of up to  $1.3 \times 10^{19}$  nvt. The application of appropriate fluence attenuation factors (Reference 10) at the 1/4 and 3/4 thickness location results in RT<sub>NDT</sub> shifts of 223°F and 170°F respectively, for the limiting weld material. The critical condition which defines a temperature below which the core cannot be made critical (strictly based upon fracture mechanics' considerations) is 352°F. The most limiting wall location is a 1/4 thickness. The minimum criticality temperature, 352°F is the minimum permissible temperature for the inservice system hydrostatic pressure test. That temperature is calculated based upon 2310 psig inservice hydrostatic test pressure.

- I. Specification 3.1.2 References, change reference (2) to read as follows:

(2) ASME Boiler and Pressure Vessel Code, Section III, A-2000.

Technical Specification pages, revised as indicated above, are attached. The proposed changes are shown by vertical lines in the right-hand margin.

## II. Discussion

The above proposed Technical Specification changes are due to the expiration of the current Palisades reactor vessel pressure-temperature limits. The new limits reflect findings which establish the actual vessel weld chemistries which differ from that of the surveillance capsule material.

The development of the equations used to calculate the limits is documented in the attached Engineering Analysis EA-DCZ-85-02.

## III. Basis for Determination of No Significant Hazards Consideration

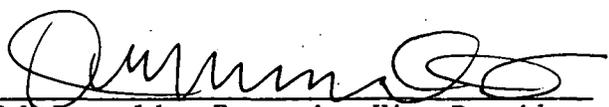
We have reviewed the proposed change to change the pressure-temperature limits for reactor heatup and cooldown to determine whether or not this change involves a significant hazards consideration. In our review, we have used the guidance of certain examples (48FR14870). One of the examples (ii) in this guidance is if a change constitutes an additional limitation, restriction, or control not presently included in the technical specifications; it can be considered not likely to involve a significant hazards considerations.

Since this proposed change addresses more restrictive requirements for operation, i.e., pressure-temperature limits for reactor heat-up and cooldown due to changes in reactor vessel properties because of increased irradiation, in order to maintain the same margin of safety, we have determined that this change falls within the example and therefore the changes does not involve a significant hazards consideration.

IV. Conclusion

The Palisades Plant Review Committee has reviewed this Technical Specification Change Request and has determined that this change does not involve an unreviewed safety question and therefore involves no significant hazards consideration. This change has also been reviewed under the cognizance of the Nuclear Safety Board. A copy of this Technical Specification Change Request has been sent to the State of Michigan official designated to receive such Amendments to the Operating License.

CONSUMERS POWER COMPANY

By   
J W Reynolds, Executive Vice President  
Energy Supply

Sworn and subscribed to before me this 14th day of June 1985.

  
Barbara P Townsend, Notary Public  
Jackson County, Michigan  
My commission expires August 23, 1988.

