



Palisades Nuclear Plant: 27780 Blue Star Memorial Highway, Covert, MI 49043

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U.S. Nuclear Regulatory Commission
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DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT
10CFR50.46 LARGE BREAK LOSS OF COOLANT EVALUATION MODEL FOR
PALISADES PLANT

In a conference telephone call on October 10, 1996, and a letter dated October 11, 1996, the NRC notified Consumers Power Company (CPCo) of errors that had been discovered in Siemens Power Corporation computer models for analyses of Large Break Loss of Coolant Accidents (LBLOCA). On October 16, 1996, CPCo presented to the NRC its initial conclusions about the impact of these errors on LBLOCA analyses for the Palisades Plant. The NRC requested that these conclusions be confirmed in writing on the Palisades docket. This letter provides that confirmation.

During another conference call held on October 23, 1996, Siemens provided the NRC with an additional clarification about the conservatism available in the LBLOCA analyses for some of the affected plants. During the call it was noted by Siemens that this clarification did not apply to Palisades. This call is mentioned here only for completeness.

In the October 10 conference call and subsequent letter of October 11, the NRC summarized its concerns with the Siemens LBLOCA models. First, in Siemens' 1986 LBLOCA model, anomalous predictions of heat transfer coefficients had made the model questionable for use within a specific range of reflood rates between 1.0 and 1.77 in/sec. Second, for the 1991 LBLOCA model, it was the NRC's opinion that the 1986 model concern had not been not fully resolved and an additional change had been introduced without adequate justification. The NRC concluded, therefore, that the 1991 model was unacceptable for use. In view of these concerns, CPCo has consulted with Siemens, and has reached the following conclusions:

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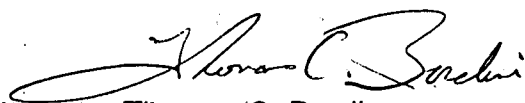
1. The Palisades reflood rate is outside the range of 1.0 to 1.77 in/sec during the time period when Peak Clad Temperature (PCT) of the fuel is approached. The Palisades LBLOCA analysis is, therefore, not affected by the anomalous heat transfer coefficients predicted by the 1986 model.
2. Since the most recent Palisades analysis of record did utilize the 1991 model, a reanalysis has been performed using the 1986 model. The PCT predicted with the 1986 model was 1890 °F for the limiting condition, as compared with a PCT of 1862 °F which had been predicted using the 1991 model. Since the Palisades reflood rates are outside the range of concern, we conclude that the heat transfer coefficients used in Palisades' application of the 1986 model are acceptable.
3. Future reanalysis using a model corrected for these deficiencies is not expected to result in a predicted PCT above the 10CFR50.46 limit of 2200°F. It is expected that all the criteria of 10CFR50.46(b) will continue to be satisfied.

In order to completely resolve this issue, CPCo will work with Siemens Power Corporation to ensure that the Palisades LBLOCA analysis continues to meet all requirements of 10CFR50.46. CPCo will continue to assess this subject as new information becomes available, and will take any additional action that may be warranted.

It should also be noted that in accordance with 10CFR50.46(a)(3)(ii), the changes or errors discussed in this letter are reportable to the NRC as an annual report. CPCo has concluded that this letter satisfies that reporting requirement. This conclusion will also be reassessed, if appropriate, as new information becomes available.

SUMMARY OF COMMITMENTS

This letter contains no new commitments or changes to existing commitments.



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