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Docket No. 50-312

Mr. J. J. Mattimoe
Assistant General Manager and
Chief Engineer
Sacramento Municipal Utility District
6201 S Street
P. O. Box 15830
Sacramento, California 95813

Dear Mr. Mattimoe:

On November 1, 1979, the NRC staff met with fuel vendors and industry representatives to discuss 10 CFR 50 Appendix K cladding swelling and rupture models. The staff presented new models (Ref. 1) that we believed met the requirements of 10 CFR 50 Appendix K and 10 CFR 50.46. Each fuel vendor was then asked to show how, in light of the new models, the plants analyzed with their EMs continued to meet the performance limits of 10 CFR 50.46. The Babcock & Wilcox (B&W) response (Ref. 2) concluded that the impact of the NRC curves was small and did not result in cladding temperatures in excess of 2200 F.

Based on this and the licensee's response (Ref. 3) and the fact that the use of the data did not produce a large effect when the overall conservatism in an ECCS evaluation model calculation was considered, we concluded that there was no significant safety concern for your facility.

Since the November 1st meeting, we have received revised EMs from all LWR fuel vendors except B&W (Refs. 4 and 5). Recently, Consumer's Power Company submitted (Ref. 6) a B&W supplemental ECCS calculation that used the cladding models of NUREG-0630. Our evaluation of this submittal is given in Reference 7. The results of the Midland calculation showed a need to reduce linear heat generation rates by 1 kW/ft at the 2-foot, 4-foot and 6-foot core elevations even though partially offsetting margins were applied in other parts of their ECCS model. The supplemental ECCS calculation for Midland is applicable to all B&W plants (OR and OL); therefore, it may be that the swelling and rupture data described in NUREG-0630 may have more effect on the peak cladding temperatures calculated by the B&W EM than previously considered in 1979 and 1980.

Accordingly, you are requested to provide within the next 30 days, a schedule for submitting supplemental ECCS calculations similar to those provided for Midland in Reference 6. These calculations may be generic to other B&W plants and they may employ offsetting margins derived from compensating models. Justification will be required for the use of unapproved compensating models.

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In addition, permanent modifications to your ECCS evaluation models should be developed and implemented, and an implementation schedule should be provided to us as soon as possible, but not later than 60 days after this 30-day period.

We will be pleased to meet with you or any of your representatives to discuss this matter further. Please contact your NRC Project Manager if you wish such a meeting or if you have questions.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P. L. 96-511.

Sincerely,

Original signed by
Thomas M. Novak, Assistant Director
for Operating Reactors
Division of Licensing

Enclosure:
List of References

cc w/enclosure:
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See next page

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Sacramento Municipal Utility
District

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cc w/enclosure(s):

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California Department of Health
ATTN: Chief, Environmental
Radiation Control Unit
Radiological Health Section
714 P Street, Room 498
Sacramento, California 95814

REFERENCES

1. D. A. Powers and R. O. Meyer, "Cladding Swelling and Rupture Models for LOCA Analysis", NRC Report NUREG-0630, April 1980.
2. J. H. Taylor (B&W) letter to D. G. Eisenhut (NRC), November 2, 1979.
3. J. J. Mattimoe (SMUD) letter to D. G. Eisenhut (NRC), Docket No. 50-312, January 2, 1980.
4. R. J. Mattson (NRC) letter to L. Lanese (GPU) and R. G. Snipes (DPCo), September 8, 1981.
5. L. C. Lanese (GPU) letter to R. J. Mattson (NRC), November 3, 1981.
6. J. W. Cook (CPCo) letter to H. R. Denton (NRC), Docket No. 50-329/330, April 2, 1982. Enclosure: B&W Report No. 12-1132424, Rev. 0, "Bounding Analysis Impact Study of NUREG-0630".
7. "Safety Evaluation Report Related to the Operation of Midland Plant, Units 1 and 2", NRC Report NUREG-0793, May 1982.