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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

February 3, 1981

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:

We have completed our review of your letter dated January 25, 1980, which responded to our request for information dated November 21, 1979, concerning the loading on steam generator tubes induced by slug flow during natural circulation in B&W reactor plants.

In order to bound the magnitude of the loading on the steam generator tubes during natural circulation, your analysis assumes that the slug travels at a velocity of 64.4 ft/sec. This corresponds to full power, forced flow operation and bounds any pressure differential which could develop under natural circulation. By use of the dynamic momentum equation, the maximum force on each tube as a result of the force on the upper tube sheet would be less than 1/10 of the tube's theoretical buckling load of 700 pounds. Based on this analysis we conclude that slug flow induced by natural circulation will not result in adverse loading of the steam generator tubes.

Therefore, we consider Item II.K.2.15 "Effect of Slug Flow on Steam Generator Tubes" of the TMI Action Plan Requirements is resolved for Rancho Seco Nuclear Generating Station.

Sincerely,

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Licensing

cc: See next page
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Sacramento Municipal Utility
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cc w/enclosure(s):

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