

October 4, 2001

Ms. Patricia Borchmann  
176 Walker Way  
Vista, CA 92083

SUBJECT: CONCERNS ON SEISMIC DESIGN BASIS OF SAN ONOFRE NUCLEAR  
GENERATING STATION, UNITS 2 AND 3 (TAC NOS. MB2466 AND MB2467)

Dear Ms. Borchmann:

This letter forwards to you the initial response of Southern California Edison, the licensee for the San Onofre Nuclear Generating Station (SONGS), to certain concerns raised in your petition dated April 17, 2001, regarding the SONGS seismic design basis. The U.S. Nuclear Regulatory Commission (NRC), in a letter dated August 2, 2001, requested that the licensee provide to the NRC an assessment of the information presented by Mark Legg, Ph.D. in item number 2 of his comments forwarded with your petition.

The enclosure is the licensee's initial response to NRC's request. In the letter, the licensee states that they have not seen data that establishes that the Oceanside detachment/thrust system is under SONGS, and that no definitive conclusions can be drawn as to the significance of the postulated fault from the cited references. Therefore, the letter states, the licensee is conducting a study to determine whether the postulated blind thrust fault would have any significant effect on the seismic risk of SONGS Units 2 and 3. The licensee plans to provide the results of the study and their final assessment of the seismic concerns raised by Dr. Legg in his comment No. 2 to the NRC by December 31, 2001.

The licensee's letter discusses each of the items in Dr. Legg's comment No. 2. Among the conclusions drawn in the letter is that, while there is general agreement that detachment faults are present in the Southern California continental borderlands, there is much uncertainty regarding whether they have been reactivated as blind thrust faults, the degree to which they may have been reactivated along their entire length, and their possible behavior in the contemporary tectonic environment. The licensee goes on to state that there is insufficient information provided in published articles to provide constraints on the location, geometry, activity, and slip rates of the newly postulated blind thrust faults to characterize the faults for seismic hazard analysis. The letter adds that the licensee plans to interface directly with researchers to elicit more detailed information needed to evaluate models, parameter values, and associated uncertainty.

With regard to concerns that newer attenuation relations based on recent large earthquakes are more accurate than those used for the safety evaluation conducted in the late 1970s, the licensee notes that a 1995 seismic probabilistic risk assessment for SONGS used the latest information available at that time and used prepublication versions of most of the attenuation relations noted in Dr. Legg's comment.

Regarding near-source directivity effects, the letter states that the safety-related structures at SONGS have natural frequencies of about 1.5 Hz and higher, while near-source directivity effects become significant only at frequencies significantly lower than 1.5 to 2 Hz. Therefore,

the licensee considers it unlikely that the near-source directivity effects would have significant impacts at the SONGS site.

The letter also states that evidence cited by Dr. Legg does not demonstrate that the faults in the vicinity of SONGS have been reactivated and could pose a significant hazard to SONGS.

The NRC staff has reviewed the licensee's letter. Based on the information provided by the licensee, the NRC staff concludes that the licensee's approach to resolving the issue is reasonable. The NRC staff has followed and will continue to follow the licensee's actions on this issue. The NRC staff will review the licensee's final analysis and will inform you of the results of that review.

If you have any questions regarding this letter, please contact Mike Scott at 301-415-1421.

Sincerely,

**/RA/**

Stuart A. Richards, Director  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-361 and 50-362

Enclosure: Letter from Southern California Edison to  
U.S. NRC dated September 21, 2001

cc w/encl: See next page

effects become significant only at frequencies significantly lower than 1.5 to 2 Hz. Therefore, the licensee considers it unlikely that the near-source directivity effects would have significant impacts at the SONGS site.

The letter also states that evidence cited by Dr. Legg does not demonstrate that the faults in the vicinity of SONGS have been reactivated and could pose a significant hazard to SONGS.

The NRC staff has reviewed the licensee's letter. Based on the information provided by the licensee, the NRC staff concludes that the licensee's approach to resolving the issue is reasonable. The NRC staff has followed and will continue to follow the licensee's actions on this issue. The NRC staff will review the licensee's final analysis and will inform you of the results of that review.

If you have any questions regarding this letter, please contact Mike Scott at 301-415-1421.

Sincerely,

**/RA/**

Stuart A. Richards, Director  
Project Directorate IV  
Division of Licensing Project Management  
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Docket Nos. 50-361 and 50-362

Enclosure: Letter from Southern California Edison to  
U.S. NRC dated September 21, 2001

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