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PREDECISIONAL

March 17, 2004

U.S. Nuclear Regulatory Commission
ATTN: Mr. James Randall Hall
One White Flint North
Mail Stop O-13D13
Washington, DC 20555

Subject: Tsunami Hazard Study for the Diablo Canyon Site in Central California

Dear Mr. Hall:

The purpose of this letter is to forward additional information developed during our assessment of the tsunami hazards for the Diablo Canyon Independent Spent Fuel Storage Installation license review. This letter addresses the subject study with associated background information for your consideration.

As part of our technical review of the Diablo Canyon Independent Spent Fuel Storage Installation, we examined probable maximum flooding of the Independent Spent Fuel Storage Installation from tsunamis. We concluded in the Safety Evaluation Report for the Diablo Canyon Independent Spent Fuel Storage Installation that the Pacific Gas and Electric Company's tsunami hazard analysis was acceptable because the Independent Spent Fuel Storage Installation pad and transporter route (which bound the vertical extent of the overall Independent Spent Fuel Storage Installation) are located at elevations significantly higher than units 1 and 2 of the Diablo Canyon nuclear power plant. The regulations at 10 CFR §72.40(c) indicate that a re-evaluation of a site is not required when relevant information is covered under previous licensing actions, except where new information could alter the original site evaluation findings. The Nuclear Regulatory Commission (NRC) staff has previously accepted Pacific Gas and Electric Company's analysis of probable maximum tsunami flooding for the Diablo Canyon nuclear power plant. In addressing the issue as part of the Independent Spent Fuel Storage Installation application, Pacific Gas and Electric Company indicated that they reviewed more recent information on tsunamis and concluded that it does not alter the previous findings for the Diablo Canyon nuclear power plant site, and the staff agreed with that determination. Therefore, the staff found that probable maximum tsunami flooding at the proposed Independent Spent Fuel Storage Installation is adequately addressed by the previous licensing actions for the Diablo Canyon nuclear power plant.



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Within the scope of that review, one of our contractors (Dr. Robert Sewell) examined the tsunami hazard at the proposed Independent Spent Fuel Storage Installation and has recently provided us with a draft report of his findings. In particular, Dr. Sewell evaluated the potential for tsunami floods generated by nearby submarine landslides. While traditional assessments focus on earthquake-initiated tsunamis, some tsunami scientists have recently examined the possibility of significant tsunami hazards from submarine landslides. The importance of landslide generated tsunamis to hazard assessments, especially their likelihood, frequency, and severity, are strongly debated and not universally accepted by tsunami experts.

Dr. Sewell's report suggests, based on preliminary computer models, that landslide-generated tsunamis are possible along the central California coast. Most of his models do not generate tsunamis large enough to impact the Independent Spent Fuel Storage Installation pads. However, most of his models produce wave heights that would exceed the maximum wave heights previously analyzed for the Diablo Canyon nuclear power plant. Dr. Sewell assigns probabilities to his scenarios on the order of one in several hundred to one in several hundred thousand per year, but notes that the uncertainty of his probability estimates are one to two orders of magnitude.

We have not formally reviewed Dr. Sewell's draft report nor have we accepted it. As a geologist and seismologist, my technical opinion is that the methodology is beyond state of the art, the uncertainties too large, and the results too speculative to be considered in current licensing decisions. The information in Dr. Sewell's report, while interesting from a scientific perspective, is not technically robust enough to challenge the existing licensing basis of the Independent Spent Fuel Storage Installation or Diablo Canyon nuclear power plant. Therefore, I see no need to expend additional project resources to pursue detailed technical review of Dr. Sewell's work.

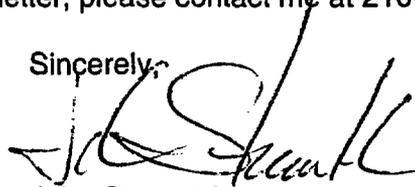
Based on our discussions, however, I am forwarding the enclosed report so that the NRC may stay informed of these developments in landslide-generated tsunami studies. In particular, I suggest that we convey the results to technical leads in the Office of Nuclear Reactor Regulation and the Office of Nuclear Regulatory Research, because substantial changes in the technical basis for tsunami hazard assessments could warrant re-evaluating previous conclusions regarding nuclear facilities on the coastline of the western United States. We at the Center for Nuclear Waste Regulatory Analyses are prepared to provide additional technical assistance to the NRC, including further development of Dr. Sewell's avenue of research, if the agency concludes that additional tsunami studies are warranted.

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If you have any further questions concerning this letter, please contact me at 210-522-5247.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Stamatakos', written over a faint, larger version of the same signature.

John Stamatakos
Principal Research Scientist

/slo
Enclosure: As Stated (also predecisional)