



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
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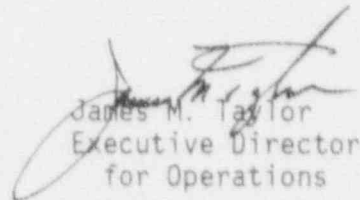
The Honorable Leon E. Panetta  
U.S. House of Representatives  
Washington, D.C. 20515

Dear Congressman Panetta:

I am responding to your letter of November 26, 1991, to Chairman Selin. You requested assistance in addressing questions raised by your constituent, Mr. Michael Orians, regarding the long-term seismic safety of the Diablo Canyon Nuclear Power Plant. I have enclosed our response to the questions contained in your Constituent Request form which was an enclosure to your letter.

Please let us know if we can be of further assistance on this matter.

Sincerely,

  
James M. Taylor  
Executive Director  
for Operations

Enclosure:  
Response to Questions

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NRC Response To Congressman Panetta's  
Letter of November 26, 1991

Question

Whether or not the various studies done on the structural integrity of the plant to withstand earthquake damage were based upon tests designed for a new plant or one that is 10 years old, as is Diablo. Were the studies made on the basis of a plant having operated for 10 years and the subsequent stress this would place on such things as the steel structures? On which basis were the tests done - testing a new building or one that has been in operation for 10 years?

Answer

The NRC staff assessed the structural integrity of the Diablo Canyon plant against earthquake damage on the basis of the plant as constructed and operated at the time of the study. The staff performed walkdown inspections of the plant to assess the condition of various plant structures and equipment. The staff compared the responses of plant structures to recorded ground motions at the site to verify the accuracy of analytical predictions. The staff concluded that the plant is safe upon finding that it met the requirement to be capable of withstanding earthquake effects at the end of its licensed term of 40 years with sufficient margin.

The licensee tested the containment structure at design pressure following its construction and must perform integrated leak rate tests at required intervals. However, other structures were not subjected to any special tests for this study, but were analyzed using proven techniques. The licensee tested and analyzed the seismic Category I equipment at the plant to ensure it was qualified. The licensee also verified that the results of the qualification tests apply to the recently completed long-term seismic study.

Nuclear power plants are designed to maintain their safety-related functions against extreme and highly unlikely loads. The operating loads from 10 years or 40 years of normal operation are a small fraction of the extreme loads that are considered in the plant design. The licensee will identify any age-related degradations through the normal maintenance process and rectify them as appropriate. The nuclear industry has performed technical studies that show that nuclear power plant structures should be capable of maintaining their structural integrity well beyond 60 years and still withstand design basis loads such as large earthquakes.