



**Pacific Gas and  
Electric Company**

**Gregory M. Rueger**  
Senior Vice President and  
General Manager  
Nuclear Power Generation

77 Beale Street, 32nd Floor  
San Francisco, CA 94105

*Mailing Address*  
Mail Code B32  
P.O. Box 770000  
San Francisco, CA 94177

415.973.4684  
Fax: 415.973.2313

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PG&E Letter HBL-05-017

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Docket No. 50-133, OL-DPR-7  
Humboldt Bay Power Plant, Unit 3  
Special Nuclear Material Control and Accountability Project Final Report

Dear Commissioners and Staff:

Enclosed is a copy of the Pacific Gas and Electric Company (PG&E) Humboldt Bay Power Plant (HBPP) Special Nuclear Material (SNM) Control and Accountability Project Final Report. The Final Report (Enclosure 1) provides the results of the investigation into the location of three 18-inch segments cut from a fuel rod in fuel assembly A-49, the results of the investigation into the location of one missing intact and three missing partial incore detectors, as well as the overall control and accountability of SNM at HBPP.

On February 22, 2005, PG&E submitted the HBPP SNM Control and Accountability Project Interim Reports in PG&E Letter HBL-05-001. PG&E stated it would continue to search documentation, complete interviews, and analyze scenarios of possible offsite shipment of the three 18-inch segments, as well as perform a cause analysis for the missing 18-inch rod segments and one intact and three partial incore detectors. For any scenario that could not be dispositioned as highly unlikely, PG&E would perform an analysis of the public health and safety implications of that scenario being true. The searches and analyses have been completed, and their results are reflected in the Final Report. PG&E continues to believe that there is reasonable, but not conclusive, evidence that the three 18-inch rod segments have been found in the spent fuel pool (SFP), but in a broken fragment form rather than as intact 18-inch cut segments. However, given that the identification of the segments in the SFP is not conclusive, when considering the aggregate of possible sites the segments could have been shipped to, it is also reasonably possible that the segments were shipped offsite to either the Nuclear Fuel Services fuel reprocessing facility or the Barnwell or Hanford low level radioactive waste facilities. All other possibilities have been dispositioned as either highly unlikely or implausible.

NM5501

Also enclosed with this letter are three documents previously submitted with the Interim Reports on February 22, 2005, that have since been modified. These documents are:



- "Theft or Diversion Scenario" (Enclosure 2)
- "Spent Fuel Pool Physical Inspection" (Enclosure 3)
- "Engineering Review of Control and Accountability of Modified Fuel Assemblies at Humboldt Bay Power Plant Unit 3" (Enclosure 4)

The modifications to Enclosure 2 were primarily the result of changes in dose calculations. Enclosure 3 was changed to include additional video documentation and to clarify search results of various SFP locations. Enclosure 4 deleted an incorrect reference and corrected minor typographical errors.

As noted in Enclosure 2, PG&E requests, in accordance with 10 CFR 2.390(a), the NRC withhold from public disclosure portions of Enclosure 2 related to the theft or diversion scenario due to security concerns. The investigations and analyses presented in Enclosure 2 support PG&E's conclusion that theft or diversion of the three 18-inch rod segments is highly unlikely.

If you have any questions concerning the enclosed information, please contact me at (415) 973-4684 or David Sokolsky at (707) 444-0801.

Sincerely,

A handwritten signature in black ink, appearing to read 'Greg Rueger', written over a horizontal line.

Gregory M. Rueger

Enclosures

cc: Emilio M. Garcia  
John B. Hickman  
Bruce S. Mallett  
PG Fossil Gen HBPP Humboldt Distribution