

POTENTIAL FAULT

On November 14, 2008, PG&E notified the NRC that **preliminary results from ongoing studies by PG&E and the U.S. Geological Survey (USGS)** indicate that there is a zone of seismicity that could indicate the presence of a fault approximately 15 km in length, located approximately 1 km offshore from DCP. Subsequently, PG&E has informally referred to this zone of seismicity as the potential “Shoreline Fault.” PG&E has been collaborating with the USGS to collect and analyze new geological, geophysical, and seismic data to develop improved tectonic models for the central California coastal region through the Collaborative Research and Development Agreement.

PG&E informed the NRC staff that it had **performed an initial** evaluation of the potential **ground motion levels at DCP** from the hypothesized fault which concluded that these motions would be bounded by the ground motion levels previously determined for the current licensing basis (the larger Hosgri fault). In addition, PG&E stated that the tsunami hazard threat is relatively small since it is a strike-slip fault rather than a reverse fault and, therefore, the tsunami hazard from the potential new fault is not expected to exceed the plant's design basis tsunami hazard levels.

The NRC staff undertook a preliminary independent review of possible implications of the potential Shoreline Fault to DCP using the initial information provided by USGS through PG&E. This review is documented in Research Information Letter RIL 09-001, “Preliminary Deterministic Analysis of Seismic Hazard at Diablo Canyon Nuclear Power Plant from Newly Identified ‘Shoreline Fault,’” and can be found in Agencywide Documents Access and Management System (ADAMS) Accession No. ML090330523 (Reference 3).

The NRC staff's assessment indicates that the best estimate 84th percentile deterministic seismic-loading levels predicted for a maximum magnitude earthquake on the potential Shoreline Fault are below those levels for which the plant was previously analyzed in the DCP Long-Term Seismic Program. **Considering the results of the deterministic analyses as a whole and the current level of uncertainty, the NRC staff concludes that the postulated Shoreline Fault will not likely cause ground motions that exceed those for which DCP has already been analyzed.**

The NRC staff also concludes that the potential Shoreline Fault has a dominant strike-slip faulting mechanism. It is highly unusual for strike-slip faulting to cause the type of significant seafloor elevation change necessary to cause a sizable tsunami and so the NRC staff would not expect any significant changes in the tsunami hazard assessment.

Although the presence of the potential Shoreline Fault offshore of DCP is new information, based on the PG&E and NRC assessments of the potential Shoreline Fault, **it is not significant information since the design and licensing basis evaluations of the DCP structures, systems, and components are not expected to be adversely affected.**