



**RIC 2011  
Seismic Analysis Activities  
for Operating Reactors**

March 8, 2011

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**RIC 2011  
Seismic Analysis Activities  
for Operating Reactors**

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NRC/NRR  
March 8, 2011

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**Background**

- Technology for analyzing seismic information is advancing rapidly.
- U.S. Geological Survey (USGS) and others are continuing to gather and evaluate geotechnical information across the United States.
- NRC and some licensees spend a lot of time and resources reviewing new seismic information.
- Stakeholder interest in the results of these studies is high, especially on the West Coast of the United States, and growing in other areas.
- Valuable operating experience on the impacts is available from Japan.

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### Diablo Canyon

- Diablo Canyon Power Plant (DCPP), Units 1 and 2, has a license condition requiring Long-Term Seismic Program (LTSP).
- Shoreline Fault discovered in 2008 by during new phase of the cooperative research agreement.
- Preliminary NRC evaluation:
  - Research Information Letter 09-001(ADAMS (Agencywide Document Access and Management System) Accession No. ML0903305230)
  - Letter to licensee (ADAMS Accession No. ML090930459)

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### Diablo Canyon

- Final Shoreline Fault Zone report submitted to NRC in January 2011 (ADAMS Accession No. ML110140431).
- NRC independent evaluation is ongoing.
- The impacts of new seismic information is an issue for the current operating phase of the plant, not license renewal.
- Pacific Gas and Electric Company (PG&E) plans to submit a license amendment to incorporate new seismic information into the DCPP design and licensing basis.

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### GI-199

- Nuclear power plants east of the Rocky Mountains subject to GI-199, "Implications of Updated Probabilistic Seismic Hazard Analysis Estimates in Central and Eastern United States on Existing Plants." (ADAMS Accession No. ML100270582)
- Information Notice 2010-18 issued to inform licensees of implications of updated data and models (ADAMS Accession No. ML101970221)

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## Seismic Analysis in Japan

- Niigataken Chuetsu-oki earthquake (NCO) provided many lessons.
- Kashiwazaki International Symposium on Seismic Safety of Nuclear Installations, held November 24-26, 2010.
- Resolutions to address reevaluations and seismic safety research needs.

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## Summary

- Seismic studies are continuing and will inform our understanding of the seismic design and licensing basis of nuclear power plants.
- Seismic analysis is an issue for current design and licensing basis.
- Stakeholders are highly interested, well-informed, and involved both domestically and internationally.

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## Acronyms

- ADAMS Agencywide Document Access and Management System
- DCPP Diablo Canyon Power Plant
- GI Generic Issue
- LTSP Long Term Seismic Program
- NCO Niigataken Chuetsu-oki earthquake
- PG&E Pacific Gas and Electric Company

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