

From: [Jessica L. Olson](#)
To: [Lewman, Shelbie](#)
Cc: [Richard Ayres](#); [John Bernetich](#); [Docket, Hearing](#)
Subject: [External_Sender] Friends 2206 Petition re Diablo Canyon-Supplemental Information
Date: Monday, February 08, 2016 4:13:42 PM
Attachments: [16-02-08 Friends" letter to 2.206 panel.pdf](#)
[ATT00001.htm](#)

Dear Ms. Lewman-

Please find attached a supplemental submission from Friends of the Earth in support of the 2.206 petition regarding seismic safety at Diablo Canyon.

Regards,
Jessica Olson



Ayres Law Group

February 8, 2016

Margaret Watford & Lisa Regner, Petition Managers
Office of the Executive Director of Operations
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: Request pursuant to 10 C.F.R. § 2.206 for suspension of operations and enforcement of Nuclear Regulatory Commission regulations to ensure seismic safety of Diablo Canyon Power Plant

Dear Petition Managers:

Friends of the Earth (Friends) submits this letter in response to an invitation from the Executive Director of Operations (EDO) to provide additional information in support of a petition currently pending before the EDO.¹ The petition relies on significant new information that increases the estimated capability of seismic faults surrounding Diablo Canyon Power Plant (Diablo Canyon). The petition establishes that neither the licensee, Pacific Gas & Electric Co. (PG&E), nor the Nuclear Regulatory Commission (Commission) has demonstrated that Diablo Canyon can continue to operate safely in the face of reasonably foreseeable and known seismic risks. Friends therefore petitions the EDO to enforce agency regulations requiring Diablo Canyon, as a condition of operation, to demonstrate that it is able to safely shutdown following occurrence of the safe shutdown earthquake, defined as the “*maximum* earthquake potential considering the regional and local geology and seismology and specific characteristics of local subsurface material.”² Friends requests that the EDO immediately suspend Diablo Canyon’s operating licenses unless and until PG&E receives a license amendment revising the plant’s seismic design basis.

On August 26, 2014, Friends filed a Petition to Intervene and Request for Hearing with the Commission pursuant to 10 C.F.R. § 2.309, seeking to intervene in a *de facto* license amendment proceeding expanding the operating authority granted by the licenses

¹ See CLI-15-14, *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), 81 NRC __ (May 21, 2015), at *12 (referring portions of a petition to intervene, filed by Friends of the Earth pursuant to 10 C.F.R. § 2.309, to the Executive Director of Operations to be considered as a petition under 10 C.F.R. § 2.206).

² 10 C.F.R. pt. 100, App. A, § III(c) (emphasis added).

for Diablo Canyon.³ In the petition, Friends asserted that the Commission had *de facto* amended the licenses to accommodate new seismic information indicating that nearby faults were more capable than previously thought. Friends sought (1) a hearing on the *de facto* license amendment and (2) suspension of plant operations pending resolution of the issues. On May 21, 2015, the Commission issued a memorandum and order that, *inter alia*, (1) denied the request for an adjudicatory hearing regarding the plant's ability to continue to operate safely but "refer[red] the concerns underlying that request, including asserted violations of the plant's licensing basis and asserted lack of demonstrated capability for safe shutdown to the Executive Director of Operations for consideration under 10 C.F.R. § 2.206," and (2) denied the request to suspend plant operation but "refer[red] the concerns underlying that request to the Executive Director of Operations, also for consideration under 10 C.F.R. § 2.206."⁴

Neither the Commission nor PG&E has demonstrated that the plant is able to continue safely operating following the recent discovery of new seismic information. Prior to the issuance of two seismic reports,⁵ both the Commission staff and PG&E maintained that the 1977 Hosgri evaluation spectrum provides the plant's outer limits for seismic hazard and, accordingly, certified the plant's ability to operate under that postulated earthquake. But the two seismic reports showed that the Staff's and licensee's estimations of the maximum ground shaking that could be produced from the Hosgri fault and other faults were erroneous and, in fact, that the faults were much more capable than previously thought.

Nonetheless, both the Commission and PG&E have maintained that the newly updated Shoreline fault scenario resulting from the new seismic reports is a "lesser included case" under the Hosgri evaluation, thus permitting PG&E to continue operating by skirting the regulatory requirement that a licensee secure a license amendment before making any change to the plant's seismic design basis.⁶ The logic used by PG&E and the Commission to reach this determination is fundamentally faulty. Rather than use the same methods of analysis for both faults, PG&E and the Commission utilized new and less conservative methods to forecast how much ground motion would be transmitted from the Shoreline fault to the plant.⁷ The result was then compared with the previous analysis of the Hosgri fault, done with a different set of analytical methods. Not surprisingly, the

³ Petition to Intervene and Request for Hearing by Friends of the Earth, Docket No. 50-275, 50-323 (Aug. 26, 2014) (ML14254A231).

⁴ CLI-15-14, *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), 81 NRC __ (May 21, 2015), at *12.

⁵ PG&E, Central Coastal California Seismic Imaging Project, <http://www.pge.com/en/safety/systemworks/dcpp/seismicsafety/report.page> (Sep. 10, 2014) (ML14253A490) (notification of issuance letter); PG&E Letter DCL-15-035, Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding the Seismic Aspects of Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident: Seismic Hazard and Screening Report, Encl. 1 (Mar. 11, 2015) (ML15070A607).

⁶ See 10 C.F.R. § 50.59(c)(1).

⁷ See Petitioner Friends of the Earth's Supplemental Brief, Docket No. 50-275, 50-323 (June 19, 2015), at 14-20.

comparison allowed PG&E to argue that the shaking at the plant predicted by the Shoreline analysis was less than that predicted many years earlier, using different GMPEs, from the Hosgri fault. The methods used to estimate ground shaking resulting from earlier postulated earthquakes, such as the Double Design Earthquake (DDE), were peer-reviewed, scientifically accepted, Commission-approved assumptions that were in the plant's final safety analysis report (FSARU) and part of the seismic design basis. The methods used in the two new seismic reports, however, are entirely untested, not found in either the seismic design basis or elsewhere in the FSARU. Therefore, to compare ground shaking predictions resulting from applying the new GMPEs to the Shoreline fault analysis with earlier analyses using a different set of GMPEs is an apples-to-oranges comparison. On its face, such an analysis is invalid: it cannot defensibly be used to reach the conclusion that the Shoreline fault scenario is a lesser-included case under the Hosgri evaluation. PG&E has thus failed to make a credible showing that the plant is safe in the face of newly discovered seismic hazard.

Meanwhile, Diablo Canyon has continued to operate without any upgrades to its structures, systems, and components to address the new conclusion that nearby faults are more capable than previously thought. The Commission has failed to enforce its safety-related regulations requiring that, as a condition of operation, a plant be able to withstand the maximum possible earthquake, which in this case exceeds the greatest earthquake thus far evaluated at Diablo Canyon. This technically faulty, dangerous, and unlawful practice, combined with the Commission's failure to enforce its own safety-focused regulations, fails to ensure that Diablo Canyon can safely shutdown following an earthquake that is known to be possible from surrounding faults. Under Commission regulations, therefore, Diablo Canyon cannot continue to operate unless and until it receives a license amendment. The Commission is thus obligated, under its own regulations and the Atomic Energy Act, to suspend further operation of the plant unless and until the Commission provides the process required for a license amendment, and approves the amendment.⁸

Accordingly, Friends requests that the petition be granted and that the Commission suspend Diablo Canyon's operating licenses unless and until PG&E receives a license amendment revising the plant's seismic design basis and completes any modifications of Diablo Canyon's structures, systems, and components required in order to assure safe operation. Thank you for the opportunity to submit our views on this matter.

Sincerely,

/s/ Richard Ayres

⁸ The Commission has on a number of occasions in the past ordered a licensee to suspend reactor operations due to a licensee's failure to evaluate adequately seismic risk. *See* Petition to Intervene and Request for Hearing by Friends of the Earth at 26-27 (describing seven instances of Commission-ordered suspensions, including at the San Onofre Generating Station after it became known that that plant might no longer be able to meet its original 0.5 g design basis).

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cc: Electronic Hearing Docket Nos. 50-275 and 50-323