



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 27, 2024

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SUBJECT: 2.206 PETITION REGARDING SEISMIC CORE DAMAGE FREQUENCY FOR
DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2 (EPID L-2024-
CRS-0000)

Dear Diane Curran, Hallie Templeton, and Caroline Leary:

On March 4, 2024, the San Luis Obispo Mothers for Peace, Friends of the Earth, and Environmental Working Group filed a petition requesting that the U.S. Nuclear Regulatory Commission (NRC) exercise its supervisory authority to order the immediate closure of Diablo Canyon Nuclear Power Plant, Units 1 and 2 (Diablo Canyon), due to “the unacceptable risk of a seismically induced severe accident” (Agencywide Documents Access and Management System Accession No. ML24067A066). On March 12, 2024 (ML24072A529), the request was referred to the enforcement petition process under Title 10 of the *Code of Federal Regulations* (10 CFR) 2.206, “Requests for action under this subpart.”

The specific concerns in the March 4, 2024, petition, as supplemented, include:

1. Thrust faulting is neglected by Pacific Gas & Electric Company’s (PG&E) 2012 Seismic Source Characterization (SSC) model because the model assumes that a majority of large earthquakes affecting Diablo Canyon are strike-slip and disregards the significant contribution of thrust faulting earthquake sources under the Diablo Canyon site and the adjacent Irish Hills. In addition, PG&E did not use a hanging-wall term for the modeling of potential ground motions from the Los Osos and San Luis Bay thrust faults.
2. The January 2024 magnitude 7.5 (moment magnitude) earthquake centered in the Noto Peninsula (Japan), with an average slip of 2 meters on the fault, is analogous to future potential thrust mechanism earthquakes beneath Diablo Canyon. Based on the slip rate of the Irish Hills adjacent to Diablo Canyon and the slip of the Noto earthquake, large

thrust fault earthquakes will occur, on average, every 715 years near the Diablo Canyon site.

3. PG&E's 2012 SSC model does not account for an inferred offshore thrust fault that has a slip rate of 2.8 millimeters per year (mm/yr) and the potential for producing a magnitude 7.5 earthquake.
4. Seismic core damage frequency, estimated by PG&E in 2018 to be 3×10^{-5} , should be 1.4×10^{-3} per year (about once every 715 years) based on this higher recurrence rate for thrust earthquakes.

The NRC staff assembled a Petition Review Board (PRB) in accordance with NRC Management Directive (MD) 8.11, "Review Process for 10 CFR 2.206 Petitions," dated March 1, 2019, and its associated Directive Handbook 8.11, section III (ML18296A043). In an email dated May 15, 2024 (ML24136A162), the petition manager informed you that the PRB's initial assessment was to not accept your petition for review. The PRB's position was that the petition did not meet the criteria in MD 8.11 for accepting petitions under 10 CFR 2.206 because "the issues raised have previously been the subject of a facility specific or generic NRC staff review" and the petition does not provide significant new information that the staff did not consider in a prior review.

On May 15, 2024, along with the initial assessment, the petition manager offered you an opportunity to address the PRB in a public meeting, which you accepted.

The June 7, 2024, supplement to the petition responded to the PRB's initial assessment (ML24162A079).

The NRC then held the public meeting on July 17, 2024. During the meeting, your presentation (ML24198A105) discussed and expounded on information from the supplement dated June 7, 2024, and included graphics to represent your position. The transcript of that meeting (ML24218A164) is considered a supplement to the petition.

Following the public meeting, the PRB met to consider what had been presented during the meeting. The PRB determined that the concerns described above, which you raised in your petition and supplements, meet the criteria in MD 8.11, sections III.C.1(a) and (b), and will be accepted into the 10 CFR 2.206 process for further review by the PRB in accordance with MD 8.11. The PRB also determined that there is no imminent safety concern that warrants immediate shutdown of Diablo Canyon. On August 22, 2024 (ML24235A203), the petition manager informed you of this outcome. As provided by 10 CFR 2.206, we will take action on your request within a reasonable time.

For your information, I have enclosed a copy of the draft *Federal Register* notice that acknowledges the receipt of the petition. In addition, MD 8.11, and the associated NRC Office of Nuclear Reactor Regulation brochure titled, "Enforcement Petition Process," issued March 2019 can be found in ADAMS (ML18296A043 and ML19070A037, respectively). I would like to express my appreciation for your effort in bringing these matters to the NRC's attention.

Sincerely,

/RA/

Michael X. Franovich, Acting Deputy Director
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosure:

Federal Register Notice

ENCLOSURE

FEDERAL REGISTER NOTICE

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50-275 and 50-323; NRC-2024-0148]

Pacific Gas & Electric Company;

Diablo Canyon Power Plant, Unit Nos. 1 and 2;

Petition

AGENCY: Nuclear Regulatory Commission.

ACTION: 10 CFR 2.206 request; receipt.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is giving notice that by petition dated March 4, 2024, as supplemented on June 7, 2024, San Luis Obispo Mothers for Peace, Friends of the Earth, and Environmental Working Group (the petitioners) requested that the NRC exercise its supervisory authority to order the immediate closure of Diablo Canyon Nuclear Power Plant, Unit Nos. 1 and 2 (Diablo Canyon) due to “the unacceptable risk of a seismically induced severe accident.” The Commission referred the request to the enforcement petition process under NRC regulations. The petitioners’ request is included in the SUPPLEMENTARY INFORMATION section of this document.

DATES: [INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: Please refer to Docket ID **NRC-2024-0148** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2024-0148**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; email:

Stacy.Schumann@nrc.gov. For technical questions, contact the individual listed in the “For Further Information Contact” section of this document.

- **NRC’s Agencywide Documents Access and Management System**

(ADAMS): You may obtain publicly available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select “Begin Web-based ADAMS Search.” For problems with ADAMS, please contact the NRC’s Public Document Room (PDR) reference staff at 1-800-397-4209, at 301-415-4737, or by email to PDR.Resource@nrc.gov. For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the “Availability of Documents” section.

- **NRC’s PDR:** The PDR, where you may examine and order copies of publicly available documents, is open by appointment. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Perry Buckberg, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-1383; email: Perry.Buckberg@nrc.gov.

I. SUPPLEMENTARY INFORMATION:

On March 4, 2024, the petitioners filed a petition requesting that the NRC exercise its supervisory authority to order the immediate closure of Diablo Canyon due to “the unacceptable risk of a seismically induced severe accident.” An order was issued on March 12, 2024, referring the request to the enforcement petition process under section 2.206 of title 10 of the *Code of Federal Regulations* (10 CFR), “Requests for action under this subpart.”

The specific concerns expressed in the March 4, 2024, petition, as supplemented on June 7, 2024, now include:

1. Thrust faulting is neglected by Pacific Gas & Electric Company's (PG&E's) 2012 Seismic Source Characterization (SSC) model, because the model assumes that a majority of large earthquakes affecting Diablo Canyon are strike-slip and disregards the significant contribution of thrust faulting earthquake sources under the Diablo Canyon site and the adjacent Irish Hills. In addition, PG&E did not use a hanging-wall term for the modeling of potential ground motions from the Los Osos and San Luis Bay thrust faults.

2. The January 2024 magnitude 7.5 (moment magnitude) earthquake centered in the Noto Peninsula (Japan), with an average slip of 2 meters on the fault, is analogous to future potential thrust mechanism earthquakes beneath Diablo Canyon. Based on the slip rate of the Irish Hills adjacent to Diablo Canyon and the slip of the Noto earthquake, large thrust fault earthquakes will occur, on average, every 715 years near the Diablo Canyon site.

3. PG&E's 2012 SSC model does not account for an inferred offshore thrust fault that has a slip rate of 2.8 millimeters per year (mm/yr) and the potential for producing a magnitude 7.5 earthquake.

4. Seismic core damage frequency estimated by PG&E in 2018 to be 3×10^{-5} , should be 1.4×10^{-3} per year (about once every 715 years) based on this higher recurrence rate for thrust earthquakes.

The NRC staff assembled a Petition Review Board (PRB) in accordance with NRC Management Directive (MD) 8.11, "Review Process for 10 CFR 2.206 Petitions," and its associated Directive Handbook 8.11, Section III. In an email dated May 15, 2024, the petition manager informed the petitioners that the PRB's initial assessment was to

not accept the petition for review. The PRB's position was that the petition did not meet the criteria in MD 8.11 for accepting petitions under 10 CFR 2.206 because "the issues raised have previously been the subject of a facility specific or generic NRC staff review..." and the petition does not provide significant new information that the staff did not consider in a prior review.

On May 15, 2024, along with the initial assessment, the petition manager offered the petitioners an opportunity to address the PRB in a public meeting, which was accepted by the petitioners.

The June 7, 2024, supplement to the petition responded to the PRB's initial assessment.

The NRC then held the public meeting on July 17, 2024. During the meeting, the petitioner's presentation discussed and expounded on information from the supplement dated June 7, 2024, and included graphics to represent their position. The transcript of that meeting is considered a supplement to the petition.

Following the public meeting, the PRB met to consider what had been presented during the meeting. The PRB determined that the concerns as previously described in this notice, which were raised in the original petition and supplements, meet the criteria in MD 8.11, Sections III.C.1(a) and (b) and will be accepted into the 10 CFR 2.206 process for further review by the PRB in accordance with MD 8.11. The PRB also determined that there is no imminent safety concern that warrants immediate shutdown of Diablo Canyon. On August 22, 2024, the petition manager informed the petitioners of this outcome.

II. Availability of Documents

The documents identified in the following table are available to interested persons through ADAMS.

DOCUMENT DESCRIPTION	ADAMS ACCESSION NO.
Petition submitted by San Luis Obispo Mothers for Peace, Friends of the Earth, and Environmental Working Group, dated March 4, 2024.	ML24067A066
NRC SECY Order referring the petition to the 10 CFR 2.206 process, dated March 12, 2024.	ML24072A529
Petition Supplement, dated June 7, 2024.	ML24162A079
NRC Management Directive 8.11, "Review Process for 10 CFR 2.206 Petitions," dated March 1, 2019.	ML18296A043
Email from the NRC to the Petitioners re Diablo Canyon Seismic Core Damage 2.206 petition – Initial Assessment, dated May 15, 2024.	ML24136A162
July 17, 2024, Public Meeting Petitioner Presentation to the PRB.	ML24198A105
July 17, 2024, Public Meeting Official Transcript of Proceedings.	ML24218A164
Email from the NRC the Petitioners re Diablo Canyon Seismic Core Damage 2.206 petition - Accepted, dated August 22, 2024.	ML24235A203

Dated: August 27, 2024.

For the Nuclear Regulatory Commission.

/RA/

Michael X. Franovich, Acting Deputy
Director,
Office of Nuclear Reactor Regulation.

SUBJECT: 2.206 PETITION REGARDING SEISMIC CORE DAMAGE FREQUENCY FOR
 DIABLO CANYON UNITS 1 AND 2 (EPID L-2024-CRS-0000)
 DATED AUGUST 27, 2024

DISTRIBUTION: OEDO-24-00083

PUBLIC

RidsEdoMailCenter Resource
 RidsNrrOd Resource
 RidsNrrDorl Resource
 RidsNrrDorlLpl1 Resource
 RidsNrrDorlLpl2-1 Resource
 RidsNrrDorlLpl2-2 Resource
 RidsNrrDorlLpl3 Resource
 RidsNrrDorlLpl4 Resource
 RidsNrrDex Resource
 RidsResDeSgseb Resource
 RidsNrrDraAplc Resource
 RidsNrrLAABaxter Resource
 RidsNrrMailCenter Resource
 RidsOcaMailCenter Resource
 RidsOgcMailCenter Resource
 RidsOpaMail Resource

RidsRgn1MailCenter Resource
 RidsRgn2MailCenter Resource
 RidsRgn3MailCenter Resource
 RidsRgn4MailCenter Resource
 ARivera-Varona, NRR
 PBuckberg, NRR
 SLee, NRR
 CMunson, NRR
 SAlferink, NRR
 SPark, NRR
 TWeaver, RES
 DKing, NRR
 NJordan, NRR
 JKim, NRR
 AShelton, NRR
 JPelton, NRR
 DWillis, OE

ADAMS Accession Nos.:
ML24074A328 (Package)
ML24205A066 (Letter)
ML24205A067 (FRN)

NRR-106

OFFICE	NRR/DORL/LPL22/PM	NRR/DORL/LPL22/LA	NRR/DEX	RES/DE/SGSEB
NAME	PBuckberg	ABaxter	CMunson	TWeaver
DATE	07/24/2024	07/25/24	07/30/2024	08/02/2024
OFFICE	NRR/DRA/APLC	NRR/DRA/APLC	NRR/DORL/LPL4/PM	OGC – NLO
NAME	SAlferink	SPark	SLee	RCarpenter
DATE	07/30/2024	07/30/2024	07/26/2024	08/07/2024
OFFICE	NRR/DORL/LPL22/BC	QTE/Tech. Editor	NRR/DORL/DD	NRR/D
NAME	DWrona	JDougherty	ARivera-Varona	MFranovich
DATE	08/07/2024	08/09/2024	08/13/2024	08/27/2024
OFFICE	NRR/DORL/LPL22/PM			
NAME	PBuckberg			
DATE	08/27/2024			

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