

DIABLO CANYON INDEPENDENT SAFETY COMMITTEE

Thirty-Fifth Annual Report on the Safety of Diablo Canyon Nuclear Power Plant Operations

July 1, 2024 – June 30, 2025

EXECUTIVE SUMMARY and CONCLUSIONS and RECOMMENDATIONS

History and Introduction

The Diablo Canyon Independent Safety Committee (DCISC) was established as part of the June 24, 1988, settlement agreement which arose from the rate proceedings for Pacific Gas & Electric Corporation's (PG&E's) Diablo Canyon Power Plant (DCPP), owned by the corporation and operated by PG&E, with its two nuclear power reactors, each of which produces about 1,100 megawatts. Unit 1 commenced commercial operations in May 1985 and Unit 2 in March 1986. The original settlement agreement provided for a three-member Independent Safety Committee for the purpose of "reviewing and assessing the safety of operations of DCPP." The DCISC was formed in late 1989 with the appointments of Committee Members and began formal review activities and meetings on January 1, 1990. The original settlement agreement (D.88-12-083) was terminated by the California Public Utilities Commission (CPUC) in its decision to open the state electricity markets to competition on January 1, 1998; however, under the provisions of the CPUC's Decisions 97-05-088, issued on May 21, 1997, and 04-05-055, issued on May 27, 2004, 23-008-004, issued on August 14, 2023, 23-12-036 issued on December 15, 2023, and 25-06-002 issued on June 20, 2025 the DCISC has continued to function and fulfill its responsibilities as established under the terms of the 1988 settlement agreement and as amended by subsequent CPUC decisions.

Unit 1 was initially licensed by the U.S. Nuclear Regulatory Commission (NRC) to operate until November 2024 and Unit 2 until August 2025. With the passage of California Senate Bill 846 in the 2021-2022 Legislative session (SB 846) on September 2, 2022, PG&E was directed to take all necessary steps to seek extension of operations at Diablo Canyon beyond the current retirement dates, up to five additional years. That is, for Unit 1 until October 31, 2029 and for Unit 2 until October 31, 2030. SB 846 invalidated the CPUC's prior approval of PG&E's retirement of Diablo Canyon by 2025. On November 7, 2023, PG&E submitted an Operating License Renewal Application to the NRC for Diablo Canyon Unit 1 and Unit 2 to extend their current operating licenses for an additional 20 years, that is, until November 2, 2044 (Unit 1) and August 26, 2045 (Unit 2). On December 19, 2023, the NRC determined the Operating License Renewal Application to be complete, permitting the current Operating Licenses to remain in effect until the NRC's review of the Operating License Renewal Application is complete.

The Committee continues to monitor, review, assess and report on safety of operations at Diablo Canyon while the plant operates to generate electricity and, under a revised charter, continuing after cessation of generation operations until all spent fuel has been transferred from the Spent

Fuel Pools to the Independent Spent Fuel Storage Installation. Additional details on the formation and matters governing the operation of the DCISC are contained in Volume I, Section 1.1 of this report.

Committee Membership

The DCISC members serve three-year staggered terms and remain on the DCISC until a new appointment or their reappointment is made. To fill an expired term or a vacancy, the CPUC issues a public notice soliciting applications from interested persons. Up to three candidates are selected by the CPUC from the applications plus the incumbent, if willing to continue to serve. The candidates must be “persons with knowledge, background and experience in the field of nuclear power facilities and nuclear safety issues.” From the list of candidates, the new or returning member is appointed by the Governor of California, the Attorney General of California, or the Chairperson of the California Energy Commission (CEC), whichever made the original appointment.

On October 10, 2007, Robert J. Budnitz, Ph.D. was appointed by California Attorney General Edmund G. Brown Jr. to a term on the Committee expiring June 30, 2010. Dr. Budnitz was subsequently reappointed several times and on November 30, 2022, California Attorney General Rob Bonta announced the reappointment of Dr. Robert J. Budnitz to a sixth three-year term on the DCISC beginning July 1, 2022, and ending on June 30, 2025. Dr. Budnitz served as DCISC Vice-Chair during this report period, July 1, 2024, through June 30, 2025.

Although outside this Annual Report period, on September 10, 2025, Raluca O. Scarlat, Ph.D. was appointed by California Attorney General Rob Bonta to a term on the DCISC expiring June 30, 2028, to succeed Dr. Budnitz. Professor Raluca O. Scarlat is an Associate Professor in the Nuclear Engineering Department, University of California (UC) Berkeley.

On July 9, 2008, California Governor Arnold Schwarzenegger appointed Per F. Peterson, Ph.D., PE, to a three-year term on the Committee through June 30, 2011. Professor Peterson previously served as a Committee member from September 2, 2004, through October 9, 2007. Dr. Peterson was subsequently reappointed several times and on December 7, 2023 Governor Newsom reappointed Dr. Peterson to a seventh three-year term commencing July 1, 2023, and ending on June 30, 2026. Dr. Peterson served as DCISC Chair during this report period, July 1, 2024, through June 30, 2025.

On July 3, 2024, Najmedin Meshkati, Ph.D., CPE, was appointed by the Chair of the California Energy Commission Mr. David Hochschild to a three-year term on the DCISC commencing July 1, 2024, through June 30, 2027. Dr. Meshkati is a Professor of Civil/Environmental Engineering, Industrial & Systems Engineering; and International Relations at the University of Southern California (USC); and an Associate (ex-Research Fellow) with the Project on Managing the Atom at Belfer Center for Science and International Affairs at Harvard Kennedy School.

Additional details on the backgrounds of the DCISC Members, Consultants, and Counsel are contained in Volume I Section 1.2 of this report.

Overview of Activities

This thirty-fifth annual report covers the period July 1, 2024, to June 30, 2025. The DCISC held three public meetings on the following dates:

- October 9-10, 2024, Avila Beach, CA and remotely by Zoom
- February 19-20, 2025, Avila Beach, CA and remotely by Zoom
- June 10-11, 2025, Avila Beach, CA and remotely by Zoom

These public meetings are described in Section 2.0.

The Committee regularly performs the following activities:

- Three two-day public meetings each year as reported above.
- Nine or more fact-finding visits annually by individual Committee Members with one or more consultants to assess issues, review plant programs and activities, and interview PG&E and other personnel.
- Reviews of technical documents received from PG&E, the Nuclear Regulatory Commission, various state and local agencies, and other interested parties. The DCISC requests, and PG&E routinely provides copies of essentially all relevant documents generated by PG&E, the NRC, and other parties.
- Visits from time-to-time by the DCISC Members and legal counsel to offices of the CPUC and appointing officials (the Governor of California, California Attorney General and California Energy Commission) to update them on DCISC activities.
- Use of regular part-time technical consultants to assist the DCISC to perform assessments and reviews.
- Use of legal counsel to advise the Committee on its activities.
- Use of expert consultants, as needed.

The DCISC issues a report for each reporting year, which runs from July 1 to June 30. The report is approved by the Committee Members at the fall public meeting following the end of the reporting period. The first six-month interim report and subsequently thirty-four annual reports covered the periods January 1, 1990 – June 30, 2024. This thirty-fifth annual report covers the period July 1, 2024, to June 30, 2025.

The technical items covered during its public meetings were selected by the DCISC based on the DCISC's own priorities concerning which technical issues are important to cover. PG&E then

responded by providing presentations and experts to participate in the public meetings as requested. The DCISC also occasionally requested presentations on relevant issues from others in addition to presentations by PG&E. The following significant items were reviewed during the three public meetings and ten fact-finding visits held during this reporting period:

- Operations, Maintenance, and Engineering Programs and Activities
- Performance During the Unit 1 25th Refueling Outage
- Equipment Reliability and Performance
- Major Project Planning and Implementation
- Human Performance
- Performance Improvement and Corrective Action Programs
- Nuclear Safety Culture and Corporate Safety Culture
- Nuclear Safety Oversight and Quality Verification
- Radiation Protection and Radiation Releases to the Environment
- Emergency Preparedness
- Probabilistic Risk Assessment Program
- Seismic and Tsunami Safety
- Innovative Technology Initiatives
- Spent Fuel Transfers and Storage
- Regulatory Performance
- License Renewals for the Plant and the Independent Spent Fuel Storage Facility
- Independent Peer Review Panel Activities

Individual Committee Members and consultants reviewed many other items in ten fact-finding visits, inspections, meetings, and tours at DCP. The DCISC keeps track of past, current and future items for review in its Open Items List (Section 6.0 and Volume II, Exhibit F).

Member Meetings with California State Agencies

The DCISC's preference is to schedule annual meetings between its Members and their respective appointing entities and with the Commissioners or staff members of the California Public Utilities Commission to provide background on and information regarding current activities of the Committee.

On September 27, 2024, Dr. Budnitz and Assistant Legal Counsel Robert Rathie met remotely with Chief Assistant Attorney General Ms. Danielle O'Bannon, Special Assistant to the Attorney General Ms. Jessica Gordon, Supervising Deputy Attorney General Ms. Laura Zuckerman, and Deputy Attorney General Ms. Megan Hey to provide a progress report and to discuss the current status of the DCISC's activities and plans for the future including the DCISC's activities in connection with the conditional approval of extended operations for both Diablo Canyon units, seismic safety, long-range planning and aging management, and the storage of spent nuclear fuel and other topics of interest to members of Attorney General Rob Bonta's staff.

During this report period the DCISC has been in frequent contact during public meetings and fact finding with representatives of the California Department of Water Resources (DWR), a key

agency in administering the statutory mandate created by the passage of SB 846. DWR representatives with whom the DCISC Members, Technical Consultants, and Counsel have met with include Ms. Delphine Hou, Deputy Director Statewide Water and Energy; Messrs. Christian Arechavaleta, Manager Electricity and Strategic Reserve, and Eric Wulff, Manager, Power Markets Contracts Branch; Ms. Harpreet Bhalla, Energy Regulatory Manager; and DWR Consultants Dr. Deb Luchsinger and Mr. Jerry Bishof. DWR representatives attended each of the DCISC's public meetings conducted during this annual report period.

During this report period Dr. Meshkati held several meetings via Zoom with the Senior Nuclear Policy Advisor for the California Energy Commission.

Significant Conclusions

The DCISC concludes that overall PG&E operated DCPD safely during the period July 1, 2024, to June 30, 2025.

The DCISC addressed the following two significant issues during this operating period:

Reactor Vessel Embrittlement (Volume I, Section 4.26, and Volume II Exhibit D.11)

Pressurized Thermal Shock (PTS) refers to a condition that challenges the integrity of the reactor pressure vessel. The root cause of this phenomenon is the radiation-caused embrittlement of the reactor vessel. This embrittlement leads to an increase in the reference temperature for nil ductility transition which can increase to the point where the reactor vessel material can lose fracture toughness during off-normal overcooling events.

During the DCISC's previous report period, there were extensive public comments by individuals and by non-governmental organizations on embrittlement, including some requesting that Unit 1 be shut down immediately. The DCISC engaged a recognized expert on embrittlement as a Technical Consultant, Dr. Mark T. Kirk, who performed several in-depth reviews and analyses of DCPD Unit 1 Reactor Pressure Vessel embrittlement. The DCISC found during the previous period that from an embrittlement perspective, Diablo Canyon Unit 1's Reactor Pressure Vessel continued to be safe to operate for the next 20 years. (See Volume I, Section 4.26, and Exhibits D.11 through D.16 of the DCISC's 34th Annual Report for information concerning the DCISC's previous reviews regarding Reactor Vessel Embrittlement.)

During this report period, the DCISC reviewed additional public concerns on Dr. Mark Kirk's 2024 evaluations of Unit 1 Reactor Pressure Vessel Embrittlement along with questions related to reactor vessel embrittlement calculation uncertainties and to Reactor Pressure Vessel performance monitoring. The DCISC continued to conclude that from an embrittlement perspective, Diablo Canyon Unit 1's Reactor Pressure Vessel was safe to operate for the next 20 years (Section 4.27). A copy of a formal evaluation prepared by Dr. Kirk in October 2024, "Treatment of Embrittlement Uncertainties and Performance Monitoring," is included in this report (Exhibit D.11).

Additionally, DCPD successfully retrieved Reactor Pressure Vessel neutron embrittlement sample Capsule B from Unit 1 in April 2025. Follow-on testing and analysis were expected to be completed in late 2026.

Seismic Safety (Volume I, Section 4.20, and Volume II, Exhibit D.12)

Included in SB 846 was the directive for the CPUC to review the reports and recommendations of the DCISC including those related to seismic safety or deferred maintenance which may have arisen in expectation of the plant closing sooner. In response to its mandate, the DCISC performed a comprehensive review of seismic safety at DCPD during the previous report period. The DCISC concluded in its previous report period that no upgrades or improvements to seismic safety would be needed to ensure that the seismic safety of the DCPD reactors will be adequate for extended operations beyond 2025. (See Volume I, Section 4.20, Volume II, Exhibit D.10, Volume I, Section 3.2, of the DCISC's 34th Annual Report for information concerning the DCISC's previous comprehensive seismic review.)

During this report period, the DCISC reviewed Report 16 "Initial Review of the PG&E 'Updated Seismic Assessment, February 2024' by the Independent Peer Review Panel for Seismic Hazard Studies of the Diablo Canyon Nuclear Power Plant", dated on August 26, 2024, a report from the Independent Peer Review Panel (IPRP) reviewing the Updated Seismic Assessment required by SB 846 and completed by PG&E in the spring of 2024. In its report the IPRP concluded that the Hosgri Fault remains the primary seismic source for DCPD. In its review, the DCISC concluded that nothing in the IPRP Report 16 would lead the DCISC to modify substantively its current broad conclusions about the site seismic hazard. Further study was under way in several areas that could provide more information in the future and could decrease uncertainties, and the DCISC agreed that work was important to pursue. Also, the DCISC performed its own initial evaluation of the positions, claims, and conclusions of Dr. Peter Bird concerning the seismic hazard at the DCPD site which was submitted by letter dated May 16, 2024, from Dr. Bird in his capacity as an expert consultant for San Luis Obispo Mothers for Peace. Based upon its preliminary review, the DCISC did not find any basis to alter its previous conclusions about the adequacy of seismic safety at DCPD (Section 4.27).

At its February 2025 Public Meeting, the DCISC appointed an independent Seismic Review Team (SRT) to conduct a more comprehensive peer review of information provided by Dr. Peter Bird. The SRT members were Drs. Thomas H. Jordan, Michael E. Oskin, and Scott T. Marshall. In March 2025, the SRT and DCISC team met onsite at DCPD with representatives of PG&E's Geosciences Department to observe geologic formations near DCPD and discuss several technical questions regarding site geology and PG&E's seismic source characterization (SSC) evaluations. The SRT's findings were compiled in a report (Exhibit D.12) that was presented to the DCISC at its June 2025 Public Meeting at which time the Committee adopted and endorsed its conclusions and recommendations. Section 4.4 of the SRT's report provided an "Overall Assessment of the Bird Critique," as follows:

“The Bird critique comprises three main assertions:

(a) PG&E (2015, 2024) underestimated the hazard to DCPD from thrust faulting under the Irish Hills because it made four false assumptions. Removing these assumptions increases the thrust-faulting potency rate by a large factor.

(b) Three independent analytic methods give values for the total slip rate on shallow dipping thrust faults under the Irish Hills in the range of 2.0-2.8 mm/yr.

(c) The recurrence interval of Noto24-type earthquakes that involves Irish Hills thrust faulting is 715-1000 yr, which poses an unacceptable risk to DCPD.

The SRT analysis discounts the plausibility of all three statements. The SRT concludes that removing the four false assumptions in the development of a revised SSC would have no impact on the hazard estimates. The SRT estimates the slip rate on the SWBZ thrust faults under the Irish Hills to be 0.29 ± 0.07 mm/yr, which is an order of magnitude smaller than Bird's estimates. The SRT agrees with Madugo & Kottke (2024), LCI (2024), and NRC (2025) that a Noto24-type earthquake is not suitable as a characteristic earthquake for thrust faulting beneath the Irish Hills. The SRT notes that, if Noto24 were adopted as the characteristic event for the Irish Hills, the estimated recurrence interval would be ten to twenty times longer than Bird's estimates.

Finding 10: The best available science does not support the three main assertions of the Bird critique.”

The SRT also made nine recommendations for future effort and research that could further elucidate and quantify the seismic hazards associated with reverse faulting beneath the Irish Hills. The recommendations were adopted by the DCISC at the June 2025 Public Meeting for inclusion as recommendations to PG&E included in this 35th Annual Report and are listed below under “Recommendations to PG&E.”

Details of the SRT’s analysis, conclusions, and recommendations along with the related documents submitted from the public to the DCISC are included in Exhibit D.12 of this Annual Report.

Specific Conclusions

Based on its activities, the DCISC had the following specific conclusions from the major review topics examined during the current reporting period. (References to sections of this report are shown in parentheses.) Conclusions here are based on, but may vary from, information contained in Committee Fact-finding Reports in Exhibit D in Volume 2 of this report.

1. The DCISC received regular reports on the Nuclear Regulatory Commission (NRC) Performance Indicators, DCPD License Event Reports (LERs), and NRC Inspection Reports, and the DCISC investigated selected regulatory issues at its Fact-Finding Meetings. During this period, there were no LERs submitted to the NRC and NRC

inspection reports identified one Non-Cited Violation and one Finding, both of very low safety significance. This was excellent regulatory performance. (3.5)

2. DCP's regular updates on station operations were informative, and no major issues were identified. DCP's Chemistry Program was performing well with no major issues. (4.1.3)
3. DCP's Online Maintenance Program had appropriate procedural controls in place to successfully accomplish maintenance during plant operation while minimizing risk. The planned replacement of DCP Unit 1's High-Pressure Turbine during the refueling outage of Unit 1 proceeded satisfactorily. Due to the discovery of higher-than-expected erosion on internal sealing surfaces, DCP implemented a contingency plan for increasing the scope and duration of the work. The DCISC considered that this type of proactive pre-planning was commendable and enhanced safety by providing a methodical approach to resolving a major issue with minimal disruption to other outage activities. The DCISC toured the work area on two occasions and found that it was clean, well-organized, and provided a safe work environment for employees. (4.2.3)
4. DCP's program for managing plant and Independent Spent Fuel Storage Installation changes under 10 CFR 50.59 and 72.48, respectively, was being properly implemented, and DCP's Configuration Management Program was healthy with no major recent problems identified. (4.3.3)
5. The DCISC reviewed in detail four Cause Evaluations for significant equipment failures. The evaluations were found to be extensive in detailed analysis with appropriate corrective actions having been initiated. DCP's programs for performing Cause Evaluations and Root Cause Evaluations were appropriate in classifying the evaluations to be performed and conducting technical analyses to identify and correct the causes of equipment failures. DCP's program for the use of its Organizational Learning Tools and Safety Culture Assessments as a part of Cause Evaluations and Root Cause Evaluations was generally effective in capturing and initiating appropriate corrective actions for organizational deficiencies. Areas for improvement were discussed, and at DCISC recommendations, PG&E initiated two entries into the Corrective Action Program to prompt further action. (4.3.3)
6. PG&E's planning for upcoming major plant projects was being effectively managed and projects important to safety were being pursued for implementation. The DCP Engineering organization continued to provide excellent performance in supporting reliability improvements at the station. (4.3.3)
7. DCP's Human Performance has been excellent over the last two years based on data and trends in Human Performance events, and Human Performance Programs effectively incorporated tools facilitating human error prevention and analysis. (4.4.3)
8. DCP's Nuclear Safety Culture and Employee Concerns Programs were performing well with no major safety concerns having been recently identified. The status of safety culture at the PG&E corporate level was assessed during this period, and this assessment included

a meeting in June 2025 between DCISC Member Dr. Meshkati and two representatives of the PG&E Board of Director's Safety and Nuclear Oversight (SNO) Committee (a standing committee of the Board that serves as the primary mechanism for board-level oversight of safety, enterprise risk, and other critical operational matters.). (4.5.3)

9. DCP's Performance Improvement and Operating Experience Programs were healthy and implemented effectively. DCP's Corrective Action Program was performing well in that issues at the station were being effectively identified, evaluated, and tracked for resolution. (4.6.3)
10. The July 31, 2024, NRC-Evaluated Emergency Exercise was performed successfully based on the DCISC's observations and PG&E's critique measures. All exercise objectives were met. A DCISC meeting with the San Luis Obispo County Department of Emergency Services Nuclear Program Manager was beneficial to learn about the status of the county's emergency preparedness programs. (4.7.3)
11. DCP's Probabilistic Risk Assessment Program emphasized the development of various PRA applications to support extended plant operations, and the program continued to provide excellent support for enhancing the safety of plant operations. (4.8.3)
12. The DCP Nuclear Safety Oversight Committee appeared to be thorough and comprehensive in their evaluations and candid in their reports. DCP's August 2024 evaluation by the World Association of Nuclear Operators was positive overall. (4.9.3)
13. DCP's Radioactive Effluent Release Program and the Radiological Environmental Monitoring Program appeared satisfactory in calculating, monitoring, and measuring radioactivity in the environment. During 2023, there were no abnormal releases of radioactivity, and there were no abnormal levels of radioactivity detected in the environment surrounding DCP. (4.10.3)
14. The Quality Verification department was effective in providing expectations for high quality operations for the plant and in reporting on the quality of plant performance. (4.11.3)
15. The procurement and processing of new fuel for DCP was being well managed, and contracts were in place to supply all the new fuel needed to support operations through the end of the period of extended operations in 2030. (4.12.3)
16. DCP's Equipment Reliability program has been effective, and station equipment reliability was excellent during this period. (4.13.3)
17. Several station management meetings were observed, and the DCP staff covered items on their agendas efficiently while allowing adequate time for any participants to question and discuss items of interest in more detail. DCP's Management Observation Programs were properly implemented in that a large number of observations were being completed, and the observations provided valuable insights into human performance strengths and opportunities for improvement at the station. (4.14.3)

18. DCP's programs for monitoring and maintaining a high standard of system health and minimizing equipment problems were performing well. The Plant Health Committee was effectively focused on system/component health. The DCISC's reviews of system health and plant tours generally found that all equipment and areas of the facility appeared to be clean, well maintained, and in good material condition. (4.15.3)
19. Although the DCISC did not review DCP Steam Generators during this reporting period, the DCP Steam Generators (SGs) have been performing well since their replacements in 2008 and 2009, and no problems have been reported. (4.16.3)
20. DCP prepared well for Refueling Outage 1R25 and the retrieval of Reactor Vessel neutron embrittlement sample Capsule B. During the outage, DCP managed the outage schedule and scope of work well, and Capsule B was successfully retrieved. The DCISC observed several major outage management meetings and found that they were conducted efficiently and effectively. DCP's Foreign Material Exclusion Program was performing well with no major issues. (4.17.3)
21. The Safety-Security Interface Program at DCP was properly designed and implemented satisfactorily. (4.18.3)
22. DCP performed well during its recent campaign of spent fuel movement from the Spent Fuel Pools to the Independent Spent Fuel Storage Installation. The loading and moving of 12 Multi-Purpose Canisters to the Independent Spent Fuel Storage Installation was completed safely and without incident using prescriptive procedures, improved training, and rigorous controls.

PG&E's License Amendment Request to extend the 10 CFR Part 72 license for the Independent Spent Fuel Storage Installation proceeded normally within the NRC with PG&E responding to several Requests for Additional Information. On June 20, 2025, the NRC approved the renewal of the Independent Spent Fuel Storage Installation license for an additional 40-year period. (4.19.3)
23. The DCISC identified concerns with DCP's workplace seismic safety program in that it found unbraced cabinets in office areas during its visits in July and December of 2024. Corrective actions appeared appropriate and should prevent the recurrence of similar issues in the future. (4.20.3)
24. None of the information contained in a 2024 PG&E report to the California Coastal Commission regarding tsunami and other sea level hazards challenged any previous assumptions or conclusions contained in DCP's 2016 design basis analysis of the risk from a maximum probable tsunami at DCP. (4.20.3)
25. Regarding a report from the Independent Peer Review Panel (IPRP) reviewing the Updated Seismic Assessment completed by PG&E in the spring of 2024, the DCISC concluded that nothing in the IPRP report would lead the DCISC to modify substantively its current broad

conclusions about the site seismic hazard. Further study was under way in several areas that could provide more information in the future and could decrease uncertainties, and the DCISC agreed that that work was important to pursue. Studies by PG&E of the risk impacts from the IPRP recommendations concluded that postulating their acceptance would only have minor impact to Probabilistic Risk Assessment calculations of Core Damage Frequency (CDF), and the resulting CDF values would remain within the NRC's acceptance guidelines. (4.20.3)

26. The DCISC performed its own initial evaluation of the positions, claims, and conclusions of Dr. Peter Bird concerning the seismic hazard at the DCPD site. Based upon its preliminary review, the DCISC did not find any basis to alter its previous conclusions about the adequacy of seismic safety at DCPD. (4.20.3)
27. At its February 2025 Public Meeting, the DCISC appointed an independent Seismic Review Team (SRT) to conduct a peer review of information provided by Dr. Peter Bird. (B.6) In March 2025, the SRT and DCISC team met onsite with PG&E Geoscience Department representatives to observe geologic formations near DCPD and discuss several technical questions regarding site geology and PG&E's seismic evaluations. (D.8) The SRT members were Drs. Thomas H. Jordan, Michael E. Oskin, and Scott T. Marshall. The SRT's findings along with its conclusions and recommendations were presented to the DCISC at its June 2025 Public Meeting. (B.9) The SRT's conclusions and all nine recommendations were adopted by the DCISC and are detailed in the SRT's report included as Exhibit D.12 in this report.
28. The health of DCPD Fire Protection Systems was good overall, and the Fire Protection Program was effectively implemented. (4.21.3)
29. Two observed Licensed Operator Continuing Training sessions on the topics of Reactor Physics and Extensive Damage Mitigation Guidelines were satisfactory. (4.22.3)
30. DCPD's FLEX Response Procedures were appropriately integrated with other procedures for responding to emergency events, post-earthquake conditions, and severe accidents. (4.23.3)
31. The DCISC did not review any specific Decommissioning Program-related topics but continued to monitor Decommissioning-related activities via routine document reviews and other updates. (4.24.3)
32. DCPD's License Renewal Application continued to be processed by the NRC. Aging management inspections completed to date did not reveal any significant issues, and NRC reviews of the aging management inspections had not identified any problems. DCPD was fully staffed for current and long-term operations and was planning for small future staffing decreases from process improvement and normal attrition. (4.25.3)
33. The DCISC reviewed public concerns with Dr. Mark Kirk's 2024 evaluations of Unit 1 Reactor Pressure Vessel Embrittlement along with questions related to reactor pressure

vessel embrittlement calculation uncertainties and to Reactor Pressure Vessel performance monitoring. The DCISC found that from an embrittlement perspective, Diablo Canyon Unit 1's Reactor Pressure Vessel continued to be safe to operate for the next 20 years. DCPD prepared well for the retrieval of Reactor Pressure Vessel neutron embrittlement sample Capsule B, and the capsule was successfully retrieved in April 2025. Follow-on testing and analysis were expected to take 12 to 18 months to complete. (4.26.3 and Exhibit D.11)

34. The regular meetings between DCISC Members and DCPD Officers and Directors continued to be beneficial for both organizations. Property and equipment insurance policies as well as radiological insurance policies were being properly maintained by PG&E. (4.27.3)
35. The DCISC endorsed DCPD's decision to pursue electronic procedures since electronic procedures provide many benefits in improving human reliability and documenting work, subject to proper human systems integration, thereby creating substantial opportunities to improve the plant's operational safety. (4.27.3)
36. DCPD's initiative to study and use an Artificial Intelligence platform for document and data search, retrieval, and reporting was positive and had great potential for improving human performance in data analysis and reporting. There were no safety concerns associated with DCPD's current plans for the use of Artificial Intelligence at the station. (4.27.3)

Concerns

During this period, the DCISC had no specific concerns not addressed by its recommendations below.

Recommendations for the DCISC:

The DCISC made several internal recommendations for future DCISC reviews and actions during this reporting period. Details of these recommendations can be found in the DCISC's Open Items List (Exhibit F).

Recommendations to PG&E:

The DCISC made the following fifteen recommendations to PG&E during this reporting period (references to sections of this report are shown in parentheses):

PG&E Recommendation No. P11/24FF-3.11:

PG&E should continue to evaluate why a 2018 Root Cause Evaluation for a failed Auxiliary Saltwater Pump motor bearing did not result in sufficiently effective procedure changes. (Section 4.3)

PG&E Recommendation No. P1/25FF-3.3A:

PG&E should review its cause evaluation processes and initiate actions to ensure that deficiencies observed via the Organizational Learning Tool and Safety Culture Assessment are captured and tied to the initiation of appropriate corrective actions. (Section 4.3)

PG&E Recommendation No. P1/25FF-3.3B:

PG&E should review its cause evaluation processes and initiate actions to ensure that periodic trending is performed across the multiple Organizational Learning Tools and Safety Culture Assessments that are performed as a part of Cause Evaluations and Root Cause Evaluations. (Section 4.3)

PG&E Recommendation No. P12/24FF-3.6:

PG&E should review why an extent of condition review for an unbraced cabinet found by the DCISC in July 2024 did not prevent the identification of a similar condition by the DCISC in December 2024. *This recommendation was subsequently completed and closed during this period.* (Section 4.20)

PG&E Recommendation No. P4/25FF-3.6:

PG&E should review if DCPD should have considered developing FLEX guidelines for providing an alternative discharge path for the Auxiliary Saltwater (ASW) System following a Beyond Design Basis event that may cause a collapse of the Discharge Structure or otherwise obstruct the ASW System discharge. (Section 4.23)

PG&E Recommendation No. P12/24FF-3.2:

PG&E should further expand their use of electronic procedures-type applications because the improved human performance and documentation of work can directly improve the safety of operations. (Section 4.27)

The following nine recommendations from the DCISC's Seismic Review Team (SRT) were endorsed and approved by the DCISC for inclusion in this report as DCISC recommendations to PG&E. (Exhibit D.12)

PG&E Recommendation No. P/SRT-1:

The Committee recommends the development of a set of kinematically constrained structural models for reverse faults underlying the Irish Hills that can explain the folding observed since 5 Ma. (Exhibit D.12, Section 3.0)

PG&E Recommendation No. P/SRT-2:

The Committee recommends dating of low-stand abrasion platforms offshore, south of the Irish Hills, to further constrain the rate of footwall subsidence and its contribution to the Southwest Boundary Zone slip rate. (Exhibit D.12, Section 3.0)

PG&E Recommendation No. P/SRT-3:

The Committee recommends monitoring of IRSL-dating efforts and reassessment, if necessary, of the MIS 5 age assignments for the Q1 and Q2 terraces surrounding the Irish Hills. (Exhibit D.12, Section 3.0)

PG&E Recommendation No. P/SRT-4:

The Committee recommends further investigation of potential strike-slip faulting along the Los Osos trend and its impacts on the pattern of marine-terrace uplift. (Exhibit D.12, Section 3.0)

PG&E Recommendation No. P/SRT-5:

The Committee recommends that PG&E should follow up the SRT's preliminary work with a more complete study of the available GPS data. (Exhibit D.12, Section 3.0)

PG&E Recommendation No. P/SRT-6:

The Committee recommends that the fault slip models that underlie the DCPD Seismic Source Characterization should be developed into kinematic and mechanical models that can predict the interseismic deformation and can thus be directly tested against the GPS data. (Exhibit D.12, Section 3.0)

PG&E Recommendation No. P/SRT-7:

The Committee recommends that PG&E should compute the relative contributions of strike-slip and reverse faulting to the regional deformation predicted by the SSC24 (Seismic Source Characterization 2024) slip models and compare the values with the geodetic constraints. (Exhibit D.12, Section 3.0)

PG&E Recommendation No. P/SRT-8:

The Committee recommends Geologic slip-rate information should be acquired from the Rinconada and Huasna faults to permit better modeling of the shear component evident in the GPS data. (Exhibit D.12, Section 3.0)

PG&E Recommendation No. P/SRT-9:

The Committee recommends that PG&E should conduct modeling experiments to ascertain the sensitivity of DCPH hazard to the SSC modifications recommended by the SRT. (Exhibit D.12, Section 3.0)

PG&E Response:

California Public Utilities Code Section 712.1 requires the Committee to annually transmit its findings and recommendations for improved safety to PG&E and for PG&E to respond to the Committee's annual report. The annual report, incorporating PG&E's response, is then transmitted to the Legislature, the Governor, the Public Utilities Commission, the Energy Commission, the United States Nuclear Regulatory Commission, and to PG&E.

When received PG&E's Response will be incorporated as Section 9.0 of the 35th Annual Report and subsequently reviewed by the DCISC during the next reporting period.