



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

January 29, 2024

Ms. Paula A. Gerfen
Senior Vice President, Generation
and Chief Nuclear Officer
Pacific Gas and Electric Company
Diablo Canyon Nuclear Power Plant
P.O. Box 56
Mail Code 104/6
Avila Beach, CA 93424

SUBJECT: DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2 – AGING
MANAGEMENT AUDIT PLAN REGARDING THE LICENSE RENEWAL
APPLICATION REVIEW

Dear Ms. Gerfen:

By letter dated November 7, 2023 (Agencywide Documents Access and Management System Accession No. ML23311A154), Pacific Gas and Electric Company (PG&E) submitted an application for the renewal of Facility Operating License Nos. DPR-80 and DPR-82 for Diablo Canyon Nuclear Power Plant (DCPP), Units 1 and 2 to the U.S. Nuclear Regulatory Commission (NRC). PG&E submitted the application pursuant to Title 10 of the *Code of Federal Regulations* Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," for license renewal.

The NRC plans to conduct an Aging Management Audit from February 12, 2024 – July 31, 2024, in accordance with the enclosed regulatory audit plan. The Aging Management Audit will be conducted at the NRC Headquarters and DCPP site, as appropriate. If you have any questions, please contact Brian Harris at (301) 415-2277 or via e-mail at brian.harris2@nrc.gov.

Sincerely,

/RA/

Lauren K. Gibson, Chief
License Renewal Projects Branch
Division of New and Renewed Licenses
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosure:
Aging Management Audit Plan

cc: w/encl.: ListServ

SUBJECT: DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2 – AGING
MANAGEMENT AUDIT PLAN REGARDING THE LICENSE RENEWAL
APPLICATION REVIEW DATED: JANUARY 8, 2024

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*** via email**

NRR-106

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NAME	BHarris*	CSmith* for SGreen	BHarris*	LGibson*
DATE	12/29/2023	1/8/2024	1/8/2024	1/29/2024

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Audit Plan

**Diablo Canyon Nuclear Power Plant,
Units 1 and 2
License Renewal Application
Aging Management Regulatory Audit**

FEBRUARY 12, 2024 – JULY 31, 2024

**Division of New and Renewed Licenses
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission**

Enclosure

Audit Plan

Diablo Canyon Nuclear Power Plant, Units 1 and 2

License Renewal Application

Aging Management Regulatory Audit

1. Background

By letter dated November 7, 2023 (Agencywide Documents Access and Management System Accession No. ML23311A154), Pacific Gas and Electric Company (PG&E) submitted an application for the license renewal of Facility Operating License Nos. DPR-80 and DPR-82 for the Diablo Canyon Nuclear Power Plant (DCPP) Units 1 and 2 to the U.S. Nuclear Regulatory Commission (NRC).

In accordance with the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," the NRC staff will perform an aging management regulatory audit to gain a better understanding of (1) the applicant's methodology to identify the systems, structures, and components (SSCs) to be included within the scope of license renewal and subject to an aging management review (AMR), and (2) the applicant's aging management programs (AMPs), AMR items, time-limited aging analyses (TLAAs), and associated bases and documentation as applicable.

2. Regulatory Audit Bases

License renewal requirements are specified in 10 CFR Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants." Guidance is provided in NUREG-1800, Revision 2, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants" (SRP-LR), dated December 2010, and NUREG-1801, Revision 2, "Generic Aging Lessons Learned (GALL) Report," dated December 2010.

3. Regulatory Audit Scope of Review

Operating Experience Review

The scope of this license renewal regulatory audit of DCPP is the NRC staff's independent review of the plant-specific operating experience (OE). The review is performed to identify pertinent examples of age-related degradation, as documented in the applicant's corrective action program (CAP) database. The results of the audit will be used to support the NRC staff's further review of AMPs, TLAAs, and aging management review line items to provide a basis for the NRC staff's conclusions on the ability of the applicant's proposed AMP and TLAAs to manage the effects of aging in the period of extended operation.

The NRC staff will use risk insights to focus the breadth and depth of its review of the plant-specific operating experience. However, the NRC staff's review is not limited to risk significant systems and components because 10 CFR Part 54 is a deterministic rule. The NRC

staff must conclude that there is reasonable assurance that activities will continue to be conducted in accordance with the current licensing basis and the effects of aging will be managed during the period of extended operation for all structures and components within the scope of 10 CFR Part 54.

Scoping and Screening Review

The purpose of the scoping and screening review is to evaluate the applicant's scoping and screening methodology used to identify SSCs within the scope of license renewal and subject to AMR, and the results of the implementation of the methodology. The review is performed by evaluating the scoping and screening process and results, as documented in the license renewal application (LRA), implementing procedures, reports, and drawings, such that the NRC staff:

- Obtains an understanding of the process used to identify the SSCs within the scope of a license renewal and to identify the structures and components subject to an AMR; and
- has sufficient docketed information to allow the NRC staff to reach a conclusion on the adequacy of the scoping and screening methodology results, as documented in the LRA.

AMP, AMR, and TLAA Review

The scope of the AMP, AMR, and TLAA review is to: (a) examine the applicant's AMPs, AMR items, and TLAAAs; (b) verify the applicant's claims of consistency with the corresponding GALL-SLR Report AMPs, and AMR items; and (c) assess the adequacy of the TLAAAs. Enhancements and exceptions will be evaluated on a case-by-case basis with the results documented in the safety evaluation (SE).

The NRC staff will audit Program Elements 1 – 10 (scope, preventive actions, parameters monitored or inspected, detection of aging effects, monitoring and trending, acceptance criteria, corrective actions, confirmation process, administrative controls, and OE of the AMPs against the elements of the associated AMP described in the GALL Report. In addition, the NRC staff will verify that the conditions at the plant are bounded by the conditions for which the GALL Report program was evaluated.

The NRC staff will also examine the applicant's program bases documents and related references for AMPs, AMR items, and TLAAAs, and interview applicant representatives to obtain additional clarification.

The NRC staff will use risk insights to inform the prioritization of its review of the documentation associated with AMPs, AMR items, and TLAAAs and to focus the breadth and depth of its review of plant-specific operating procedures and OE. However, the NRC staff's review is not limited to risk-significant systems and components because 10 CFR Part 54 is a deterministic rule and the NRC staff must conclude that there is reasonable assurance that activities will continue to be conducted in accordance with the current licensing basis and the effects of aging will be managed during the period of extended operation for all structures and components within the scope of 10 CFR Part 54.

The NRC staff has reviewed the list of risk-significant systems and components provided by the applicant to inform the establishment of priorities for the performance of the scoping and screening review.

4. Audit Activities

Throughout the Aging Management Audit, technical staff will conduct a technical review of the LRA, as supplemented and revised, the AMP basis documents, license renewal drawings, and other DCPD supporting documents, as appropriate and requested, on the applicant's electronic portal (ePortal). The project team requires continued DCPD document review capability via the ePortal throughout the audit process. Document requests for upload to the ePortal shall be made as needed via the NRC safety project manager to the appropriate applicant licensing manager.

The Aging Management Audit will consist of four parts, scheduled, and coordinated between the NRC staff and the applicant. Each audit part allows the applicant to provide context on the ePortal's contents and configuration, the methods used to develop the LRA, the corresponding results, and any areas unique to the DCPD LRA. The NRC staff will have the opportunity to have discipline-specific discussions with the applicant to discuss the approaches used for evaluation and development of AMPs, TLAAs, AMR items, with the consideration of OE. In addition, the NRC staff may identify specific technical areas where the NRC staff would benefit from a presentation or discussion to provide additional context to support the NRC staff's review. The NRC staff is to review the information needed to perform the safety review and use the information, to the extent possible, to begin developing draft input for the SE, resulting in an "SE with open items."

At the conclusion of the NRC staff's technical review, the NRC staff will identify any areas requiring inclusion in appropriate formal audit parts outlined below. The four Aging Management Audit parts include:

- Part 1: In-Office Operating Experience Audit

The NRC staff will review:

(1) Applicant's Process to Identify OE Used in Development of AMPs. The NRC staff requests that the applicant provides a presentation on the process used to identify and evaluate the pertinent OE that was used to inform the development of the AMPs as discussed in the LRA and basis documentation.

(2) Use of OE Contained in AMP Report-Out Documents. The NRC staff requests that the applicant discuss how the OE contained in the AMP report-out documents (e.g., reports of inspections, assessments, AMP effectiveness reviews) is in alignment with information contained in the CAP database and how the process described in (1), along with the use of the report-out information, would include any pertinent OE otherwise contained in the CAP database. The applicant should demonstrate that the OE identified by the process or included in the report-out documents is bounding of the OE that should be considered for developing the LRA. Additionally, the applicant should provide examples of the report-out documents and corresponding corrective action reports.

(3) The NRC Staff's Review of Age-Related OE Contained in the CAP Database.

Following the applicant's presentations on the process to identify and evaluate OE as well as the information included in the report-out documents, the NRC staff should determine if there are any specific areas of OE that have not been sufficiently addressed or if there is a need to sample the information discussed by the applicant to verify the applicant's results. If the NRC staff identifies such a need, the NRC staff will have an opportunity to perform an independent review of age-related OE contained in the CAP database, as necessary, to provide reasonable assurance that the applicant has adequately identified and evaluated pertinent OE in the development of the LRA in Part 2 of the Aging Management Audit.

- Part 2: On-Site Scoping and Screening Audit

The applicant presents the references, tools, procedures, and reports, and the approach to scoping and screening methodology developed and applied to meet the requirements of 10 CFR 54.4(a) and 10 CFR 54.21, "Contents of application – technical information." The presentation includes technical references used for scoping and screening – updated final safety analysis report (UFSAR), equipment database, Maintenance Rule information, program tools used for LRA development (i.e., database), implementing procedures, guidance documents and reports, and the plant's structural layout.

The NRC staff, with the assistance of the applicant, will conduct a detailed review of the scoping and screening methodology for mechanical, electrical, and structural systems and components. As applicable, the review will include implementing procedures, source information, electronic databases, definition of safety-related, design bases events consideration, identification of SSCs within scope, identification of intended functions, scoping/screening boundaries, license renewal drawings, identification of structural systems and components subject to AMR, exceptions taken to Nuclear Energy Institute 95-10, Appendix F, and scoping and screening reports. The review may also include discussions of commodities, consumables, insulation, overhead handling systems, abandoned equipment, and staged equipment, as applicable.

As necessary, the NRC staff will conduct walkdowns of structural systems and components within the scope of a license renewal in accordance with 10 CFR 54.4(a). The walkdown includes a review of areas, rooms or structures containing a combination of structural systems and components within the scope of license renewal.

- Part 3: On-Site Audit

The purpose of the On-Site Audit is to make visual observations of areas, equipment conditions, and configurations, and will be performed by an integrated review team. The On-Site Audit will target specific areas, equipment, and systems, and the NRC staff shall provide the applicant with the audit scope prior to the On-Site Audit to ensure access and to verify that licensee support is available.

- Part 4: In-Office Breakout Sessions

During the In-Office Breakout Sessions, the NRC staff will have the opportunity to discuss various basis documents, license renewal drawings, references, condition/corrective action reports, and to obtain additional clarification related to the LRA safety review with the applicant.

The NRC staff will hold breakout sessions, via electronic means, with the NRC staff and DCPD subject matter experts to discuss various basis documents, references, condition/corrective action reports, and interview DCPD representatives to obtain additional clarification related to the license renewal review. Breakout sessions for various technical review areas will occur at predesignated time slots during the audit, with preassigned NRC staff and DCPD representatives. The NRC staff will provide discussion topics, technical requests, and questions to the NRC safety project manager, who will then relay the information to the DCPD licensing manager. Any information requests transmitted to the applicant will be included in the audit report. All breakout sessions will be coordinated via the NRC safety project manager and the DCPD licensing manager.

Each of the four parts of the Aging Management Audit will provide the NRC staff the opportunity to have technical discussions with the applicant to gain clarity and information regarding the LRA. The audit is coordinated to support the development of the reviewers' reasonable assurance for the safety finding to be documented in the SE. The NRC staff may require additional information from the applicant for some technical areas, while finding that information on the ePortal is sufficient for other technical areas. Accordingly, some technical areas may not require inclusion in Part 3, the On-Site Audit. The NLRP safety project manager will coordinate all communications with the applicant. The NRC staff's requests for communication with the applicant will require approval of their respective technical branch chief and the NLRP branch chief.

5. Information and Other Material Necessary for the Regulatory Audit

Throughout the Aging Management Audit, the NRC staff will review the LRA, as supplemented and revised, the AMP basis documents, and other applicant supporting documents as appropriate and requested, which have been uploaded to the ePortal.

The NRC staff may request additional applicant documents to be added to the ePortal during the course of the audit. The NRC staff's requests for ePortal additions shall be made, as needed, to the safety project manager, who will provide the requests to the applicant.

All documents used as the basis for the NRC staff's review will be documented in the audit report.

6. Team Members

<u>Team Member</u>	<u>Branch/Division</u>
Brian Harris	Division of New and Renewed Licenses (DNRL)/License Renewal Projects Branch (NLRP)
Lauren Gibson	DNRL/NLRP
Chris Tyree	DNRL/NLRP

<u>Team Member</u>	<u>Branch/Division</u>
John Wise	DNRL
Steven Bloom	DNRL/Corrosion and Steam Generator Branch (NCSG)
Andrew Johnson	DNRL/NCSG
Brian Alik	DNRL/NCSG
Gregory Makar	DNRL/NCSG
Leslie Terry	DNRL/NCSG
Lydiana Alvarado Guilloty	DNRL/NCSG
Matthew Yoder	DNRL/NCSG
Paul Klein	DNRL/NCSG
Reena Boruk	DNRL/NCSG
James Gavula	DNRL/NCSG
Matthew Mitchell	DNRL/Piping and Head Penetrations Branch (NPHP)
Ali Rezai	DNRL/NPHP
Bart Fu	DNRL/NPHP
Karen Sida	DNRL/NPHP
Varoujan Kalikian	DNRL/NPHP
Seung Min	DNRL/NPHP
Jay Collins	DNRL/NPHP
Angela Buford	DNRL/Vessels and Internals Branch (NVIB)
Carol Moyer	DNRL/NVIB
Carolyn Fairbanks	DNRL/NVIB
Cory Parker	DNRL/NVIB
David Dijamco	DNRL/NVIB
Emma Haywood	DNRL/NVIB
Steven Levitus	DNRL/NVIB
John Tsao	DNRL/NVIB
Eric Palmer	DNRL/NVIB
On Yee	DNRL/NVIB
Wendell Morton	Division of Engineering and External Hazards (DEX)/Electrical Engineering Branch (EEEEB)
Adakou Foli	EEEEB/DEX
Jason Paige	DEX/Long Term Operations and Modernization Branch (ELTB)
Liliana Ramadan	DEX/ELTB
Matthew McConnell	DEX/ELTB
Brian Correll	DEX/ELTB
Jorge Cintron-Rivera	DEX/ELTB
Ian Tseng	DEX/Structural, Civil, Geotech Engineering Branch (ESEB)
George Wang	DEX/ESEB
Shao Li	DEX/ESEB
Dan Hoang	DEX/ESEB
George Thomas	DEX/ESEB

<u>Team Member</u>	<u>Branch/Division</u>
Jen Whitman	Division of Risk Assessment (DRA)/PRA Licensing B (APLB)
Naeem Iqbal	DRA/APLB
Brian Wittick	Division of Safety Systems (DSS)/Containment and Plant Systems (SCPB)
Brian Lee	DSS/SCPB
Harry Wagage	DSS/SCPB
David Nold	DSS/SCPB
Justin Donohoe	DSS/SCPB
Phillip Sahd	DSS/Nuclear Systems Performance Branch (SNSB)
Santosh Bhatt	DSS/SNSB
Noushin Amini	DSS/SNSB

7. Logistics

The Aging Management Audit will be conducted primarily via electronic means. Entrance and exit briefings will be held at the beginning and end of each audit.

On-Site Audits will be done at DCP, and portions of the audit shall be done with electronic means, as needed, to allow the NRC staff to participate remotely. The Audits schedules, which were coordinated with the NRC staff and the applicant are follows:

In-Office Operating Experience Audit: February 12, 2024 – February 23, 2024

On-Site Scoping and Screening Audit: February 26 – March 1, 2024

On-Site Audit: June 3, 2024 – June 7, 2024

In-Office Breakout Sessions: July 1, 2024 – July 31, 2024

8. Special Requests

The NRC staff requests the applicant to make available, the LRA program basis documentation and drawings, and other documents as requested.

9. Deliverables

An audit report should be issued to the applicant within 90 days from the end of the Aging Management Audit.