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July 16, 2010

John Conway
Senior Vice President
Generation and Chief Nuclear Officer
Pacific Gas and Electric Company
77 Beale Street, MC B32
San Francisco, CA 94105

SUBJECT: AUDIT REPORT REGARDING THE DIABLO CANYON NUCLEAR POWER PLANT LICENSE RENEWAL APPLICATION SCOPING AND SCREENING METHODOLOGY (TAC NOS. ME2896 AND ME2897)

Dear Mr. Conway:

By letter dated November 23, 2009, Pacific Gas & Electric Company submitted an application pursuant to 10 *Code of Federal Regulations* Part 54, to renew the operating licenses for Diablo Canyon Nuclear Power Plant, Units 1 and 2, for review by the U.S. Nuclear Regulatory Commission (NRC or the staff). On March 18, 2010, the staff completed the on-site audit of the scoping and screening methodology developed to support the license renewal application. The audit report is enclosed.

If you have any questions, please contact me by telephone at 301-415-1045 or by e-mail at nathaniel.ferrer@nrc.gov.

Sincerely,

Nathaniel Ferrer, Project Manager
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosure:
As stated

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SCOPING AND SCREENING METHODOLOGY TRIP REPORT FOR THE DIABLO CANYON LICENSE RENEWAL APPLICATION

I. Introduction

During the week of March 15 - 18, 2010, the Division of License Renewal performed an audit of the Pacific Gas and Electric (the applicant) license renewal scoping and screening methodology developed to support the license renewal application (LRA) for Diablo Canyon Power Plant (DCPP), Unit 1 and Unit 2. The audit was performed at the applicant's facility located near Avila Beach, California. The focus of the audit was the applicant's administrative controls governing implementation of the LRA scoping and screening methodology and review of the technical basis for selected scoping and screening results for various plant systems, structures, and components (SSCs). The audit team also reviewed the quality attributes of aging management programs (AMPs), quality practices used by the applicant to develop the LRA, and training of personnel that developed the LRA.

The regulatory bases for the audit were Title 10 of the *Code of Federal Regulations*, Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," (10 CFR Part 54) and NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," Revision 1 (SRP-LR). In addition, the applicant developed the LRA in accordance with Nuclear Energy Institute (NEI) 95-10, "Industry Guidelines for Implementing the Requirements of 10 CFR 54 – The License Renewal Rule," Revision 6 (NEI 95-10) which the U.S. Nuclear Regulatory Commission (NRC or the staff) has endorsed via Regulatory Guide 1.188, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses," (Regulatory Guide 1.188).

II. Background

10 CFR 54.21, "Contents of Application – Technical Information," requires that each application for license renewal contain an integrated plant assessment (IPA). Furthermore, the IPA must list and identify those structures and components (SCs) subject to an aging management review (AMR) from the SSCs that are included within the scope of license renewal. 10 CFR 54.4(a) identifies the SSCs within the scope of license renewal. SCs within the scope of license renewal are evaluated to determine if they are long-lived and passive equipment and, therefore, subject to an AMR in accordance with 10 CFR 54.21(a)(1).

III. Scoping Methodology

The scoping evaluations for the DCPP LRA were performed by a contractor, Strategic Teaming and Resource Sharing (STARS) Plant Aging Management Center of Business (COB), in consultation with the applicant's license renewal project personnel. The applicant's license renewal project staff reviewed and approved LRA-related documents prepared by the STARS COB. The audit team conducted detailed discussions with the applicant's license renewal project personnel and STARS COB personnel and reviewed documentation pertinent to the scoping process. The audit team assessed whether the scoping methodology outlined in the LRA and implementation procedures were appropriately implemented and whether the scoping results were consistent with current licensing basis requirements. The audit team noted that the applicant's scoping process was performed in accordance with its written requirements and was

consistent with the guidance provided in the SRP-LR and NEI 95-10. The audit team determined that the scoping methodology was consistent with the requirements of the Rule for the identification of SSC to be included within the scope of license renewal in accordance with the criteria of 10 CFR 54.4(a).

The audit team reviewed a sampling of components, randomly selected from the applicant's plant equipment database, to verify that the selected components were correctly evaluated to determine whether they should be included within the scope of license renewal. The audit team reviewed the selected components, which included mechanical, electrical and structural components, using the applicant's documents including the Final Safety Analysis Report, system information and piping and instrumentation drawings to perform its review. The audit team did not identify any components that had not been appropriately included within the scope of license renewal.

The audit team also reviewed a sample of system scoping results for the following systems and structures: auxiliary feedwater, emergency diesel generators, main steam and the turbine building. The audit team determined that the applicant's scoping methodology was generally consistent with the requirements of the Rule for the identification of SSCs that meet the scoping criteria of 10 CFR 54.4(a). However, the audit team determined that additional information was required in order for the staff to complete its review:

- The staff requested that the applicant provide a description of the process used to evaluate components, identified as safety-related in the component database, which were determined not to support a license renewal intended function corresponding to the requirements of 10 CFR 54.4(a)(1) and were subsequently not included within the scope of license renewal in accordance with 10 CFR 54.4(a)(1).

- The staff requested that the applicant provide a description of the process used to evaluate nonsafety-related SSCs, attached to, or which could spatially interact with, certain structures included within the scope of license renewal in accordance with 10 CFR 54.4(a)(1) (the turbine building, intake structure and raw water reservoirs), to determine whether the nonsafety-related SSCs should be included within the scope of license renewal in accordance with 10 CFR 54.4(a)(2).

- The staff requested that the applicant provide a description of the process used to evaluate nonsafety-related SSCs, located within the turbine building which had the potential to spatially interact with SSCs included within the scope of license renewal in accordance with 10 CFR 54.4(a)(1), to determine whether the nonsafety-related SSCs should be included within the scope of license renewal in accordance with 10 CFR 54.4(a)(2).

- The staff requested that the applicant provide a description of the process used to evaluate the seismic analysis which identifies both safety-related and nonsafety-related SSCs that perform a function to bring the units to safe shutdown during a seismic event to identify SSCs within the scope of license renewal (the evaluation had not been completed at the time of the audit). The staff also requested a description of any additional scoping evaluations performed to address the 10 CFR 54.4(a) criteria and a list of additional SSCs included within the scope and subject to an AMR.

IV. Screening Methodology

The audit team reviewed the methodology used by the applicant to determine if mechanical, structural, and electrical components within the scope of license renewal would be subject to an AMR (screening). The applicant provided the audit team with a detailed discussion of the processes used for each discipline and provided administrative documentation that described the screening methodology. The audit team also reviewed the screening results reports for the auxiliary feedwater, emergency diesel generators, main steam and the turbine building. The audit team noted that the applicant's screening process was performed in accordance with its written requirements and was consistent with the guidance provided in the SRP-LR and NEI 95-10. The audit team determined that the screening methodology was consistent with the requirements of the Rule for the identification of SSCs that meet the screening criteria of 10 CFR 54.21(a)(1).

V. Aging Management Program Quality Assurance Attributes

The audit team reviewed the applicant's AMPs described in Appendix A, "Final Safety Analysis Report Supplement," and Appendix B, "Aging Management Programs," of the DCPP LRA for inclusion of the appropriate quality assurance (QA) requirements for elements No. 7 (corrective action), No. 8 (confirmation process), and No. 9 (administrative controls). Appendix A states that the corrective action, confirmation process, and administrative controls elements are common to all AMPs, which the audit team confirmed in the AMP reviews. The audit team reviewed a sample of individual AMP basis documents to ensure consistency in the use of the QA attributes for each program. The purpose of this review was to ensure that the aging management activities were consistent with the staff's guidance described in SRP-LR, Section A.2, "Quality Assurance for Aging Management Program (Branch Technical Position IQMB-1)."

Based on the audit team's evaluation, the descriptions and applicability of the AMPs and their associated quality attributes, provided in Appendix A, Section A1, "Summary Descriptions of Aging Management Programs," and Appendix B, Section B1.3, "Quality Assurance Program and Administrative Controls," of the LRA, were determined to be generally consistent with the staff's position regarding QA for aging management.

VI. Quality Assurance Controls Applied to LRA Development

The staff reviewed the quality controls used by the applicant to ensure that scoping and screening methodologies used to develop the LRA were adequately implemented. The applicant used the following quality control processes during the LRA development:

- The applicant and STARS COB developed written procedures, guidelines and positions papers to direct implementation of the scoping and screening methodology, control LRA development, and describe training requirements and documentation.

- STARS COB staff prepared and checked draft LRA-related documents, which were examined by the applicant's team in a series of reviews, including reviews by the project

engineer, senior reactor operator (a subject matter expert), independent technical reviewer, and for owner acceptance.

- Self assessment teams led by independent experts examined the LRA in the period prior to application submittal. These assessments included evaluating STARS COB readiness for submittal and various portions of the LRA.

- An industry peer group and plant review committee reviewed the draft LRA.

- The comments received through the review and assessment processes were addressed and resolved. STARS COB applied configuration controls on the various draft reports and LRA versions.

- The applicant and STARS COB used their corrective action processes to track and capture any identified issues for resolution.

The audit team performed a sample review of reports and LRA development guidance, the applicant's documentation of the activities performed to assess the quality of the LRA, and held discussions with the applicant's license renewal personnel. The audit team determined that the applicant's activities provide assurance that LRA development activities were performed consistently with the applicant's license renewal program requirements.

VII. Training for License Renewal Project Personnel

The audit team reviewed the applicant's and STARS COB's training processes to ensure the guidelines and methodology for the scoping and screening activities were applied in a consistent and appropriate manner. The processes required training for all personnel participating in the development of the LRA and used only trained and qualified personnel to prepare the scoping and screening implementing procedures and reports.

- Training was required for the license renewal project personnel which followed written guidance.

- Initial orientation training and overview of license renewal processes was provided to all license renewal project personnel.

- The required training included self-study activities with follow-up discussions with project leads. Training of license renewal project personnel was captured and documented in indoctrination records.

- Mentoring was provided for new license renewal project personnel by staff with experience in other license renewal projects, including STARS COB staff involved with the applicant's LRA development that had previous LRA experience.

On the basis of discussions with the applicant's license renewal personnel responsible for the scoping and screening process, and a review of selected documentation in support of the process, the NRC audit team determined that the applicant's personnel understood the

requirements and adequately implemented the scoping and screening methodology established in the applicant's renewal application.

VIII. Final Briefing

A final briefing was held with the applicant on March 18, 2010, to discuss the results of the scoping and screening methodology audit. The audit team identified preliminary areas where additional information would be required to support completion of the staff's LRA review.

IX. Documents Reviewed

1. NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," Revision 1
2. NEI 95-10, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 The License Renewal Rule," Revision 6
3. PI-1, "Scoping and Screening of Systems, Structures and Components for STARS License Renewal Projects
4. TR-1DC, "Anticipated Transients Without Scram (ATWS) License Renewal Positions Paper"
5. TR-2DC, "Station Blackout (SBO) License Renewal Positions Paper"
6. TR-3DC, "Fire Protection License Renewal Positions Paper"
7. TR-4DC, "Environmental Qualification (EQ) License Renewal Positions Paper"
8. TR-5DC, "Pressurized Thermal Shock (PTS) License Renewal Positions Paper"
9. TR-6DC, "Criterion (a)(2) License Renewal Positions Paper"
10. TR-7DC, "Electrical/I&C Plant Spaces Approach License Renewal Positions Paper"

X. NRC Audit Team Members

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Kim Green	NRR/DLR
Donald Britner	NRR/DLR
Merilee Banic	NRR/DLR
Stanley Gardocki	NRR/DSS
Gary Armstrong	NRR/DSS

Robert Brient	Southwest Research Institute/Center for Nuclear Waste Regulatory Analyses (NRC Contractor)

Applicant Personnel Contacted During Audit

Jude Fledderman	DCPP
Terence Grebel	DCPP
Philippe Soenen	DCPP
Al Saunders	DCPP
James Johnson	DCPP
Gary Warner	DCPP
Chalmer Meyer	STARS COB

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/RA/

Nathaniel Ferrer, Project Manager
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Letter to J. Conway from N. Ferrer dated July 16, 2010

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