May 18, 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: REQUEST FOR ADDITIONAL INFORMATION RELATED TO THE REVIEW OF THE DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION - FIRE PROTECTION PROGRAMS (TAC NOS. ME2896 AND ME2897)

Dear Mr. Conway:

By letter dated November 23, 2009, Pacific Gas & Electric Company submitted an application pursuant to Title 10 of the *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). The staff is reviewing the information contained in the license renewal application and has identified, in the enclosure, areas where additional information is needed to complete the review.

The request for additional information was discussed with Mr. Terry Grebel, and a mutually agreeable date for the response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-415-1627 or by e-mail kimberly.green@nrc.gov.

Sincerely,

/RA/

Kimberly Green, Safety Project Manager
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosure:
Request for Additional Information

cc w/encl: See next page

May 18, 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: REQUEST FOR ADDITIONAL INFORMATION RELATED TO THE REVIEW OF THE DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION - FIRE PROTECTION PROGRAMS (TAC NOS. ME2896 AND ME2897)

Dear Mr. Conway:

By letter dated November 23, 2009, Pacific Gas & Electric Company submitted an application pursuant to Title 10 of the *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). The staff is reviewing the information contained in the license renewal application and has identified, in the enclosure, areas where additional information is needed to complete the review.

The request for additional information was discussed with Mr. Terry Grebel, and a mutually agreeable date for the response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-415-1627 or by e-mail kimberly.green@nrc.gov.

Sincerely,
/RA/

Kimberly Green, Safety Project Manager
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosure:
Request for Additional Information

cc w/encl: See next page

DISTRIBUTION:
See next page

ADAMS Accession No.: ML101320187

OFFICE	PM:RPB2:DLR	LA:DLR	BC:RPB2:DLR	PM:RPB2:DLR
NAME	KGreen	IKing	DWrona	KGreen
DATE	05/17/10	05/14/10	05/17/10	05/18/10

OFFICIAL RECORD COPY

Diablo Canyon Nuclear Power Plant, Units 1 and 2
License Renewal Application
Request for Additional Information Set 1
Fire Protection and Fire Water Aging Management Programs

RAI B2.1.12-1

In license renewal application (LRA) Section B2.1.12, the applicant stated an exception to Generic Aging Lessons Learned (GALL) Report aging management program (AMP) XI.M26, "Fire Protection Program" to expand the scope of the AMP to include aging management of lightning rods, mounting structures, and ground connections. The applicant stated that the aging effects of these components are managed in accordance with commitments to 10 CFR 50, Appendix A, APCSB 9.5-1 and NFPA 780 "Standard for the Installation of Lightening Protection." Although Appendix D of NFPA-780 is not part of the requirements and was included for informational purposes only, Appendix D is the only section of the standard that discusses inspection and maintenance practices.

The Diablo Canyon Nuclear Power Plant (DCPP) Fire Protection Program (FPP) includes visual inspection of lightning rods, mounting structures, and ground connections at least once every five years to verify that the lightning protection system is present without damage. However, the staff noted that NFPA-780, 2008 Edition, Appendix D, Section D.1.1.2 specifies that lighting protection systems be visually inspected at least once a year, and complete in-depth inspections of all systems be completed every three to five years. Furthermore, NFPA-780, Section D.1.3 states that in addition to visual inspections, complete testing and inspection includes: (a) tests to verify continuity of those parts of the system that were concealed and not available for visual inspection, (b) ground resistance tests of the grounding electrode termination system and its individual grounding electrodes, and (c) continuity tests to determine if suitable equi-potential bonding has been established for any new services or connections that have been added since the last inspection. In the absence of plant specific operating experience, it is unclear to the staff what the basis is for the scope and frequency of inspections of lightning rods, mounting structures, and ground connections.

Provide justification for the frequency and scope of tests and inspections of lightning rods, mounting structures, and ground connections managed for aging by the FPP, including plant specific operating experience (e.g., inspection results, corrective actions taken to mitigate aging degradation), and describe whether these results were used for trending and adjustment of testing frequency and scope.

RAI B2.1.12-2

GALL AMP XI.M26, "Fire Protection Program," recommends visual inspection and functional testing of the halon and carbon dioxide (CO_2) fire suppression system every six months to examine for signs of degradation that may affect performance of the system.

In LRA Section B2.1.12, the applicant stated an exception to GALL AMP XI.M26, in that it does not have any halon fire suppression systems within the scope of license renewal. The applicant did not provide details supporting its conclusion that the halon fire suppression systems are not within the scope of the license renewal.

Provide justification for why the halon fire suppression systems are not included in the scope of the license renewal.

RAI B2.1.12-3

GALL AMP XI.M26, "Fire Protection Program," recommends visual inspection and functional testing of the halon and CO_2 fire suppression systems every 6 months to examine for signs of degradation that may affect performance of the system.

In LRA Section B2.1.12, the applicant stated an exception to GALL AMP XI.M26 in that functional testing of the CO_2 fire suppression systems are performed every 18 months, and the turbine generator bearing No. 10 and circulating water pump high pressure CO_2 system detectors are tested every 24 months. The applicant also stated that a review of the past 10 years of operating experience and corrective action documentation has shown no loss of intended function between test intervals. However, the staff noted that in the LRA Section B2.1.12, the applicant stated that leakage and degradation has been found in the CO_2 fire suppression system.

Provide additional information such as inspection results and trending data to justify the inspection interval of once every 18 or 24 months for the CO_2 fire suppression system components.

RAI B2.1.13-1

GALL AMP XI.M27, "Fire Water Program," recommends annual hydrant hose hydrostatic tests and gasket inspections, however, in LRA Section B2.1.13, the applicant stated that it performs hydrostatic testing of its power block fire hoses every three years and gasket inspections at least once every 18 months in most areas and every 24 months in high radiation areas. The applicant further stated that it has been using a three-year frequency for hydrostatic testing of fire hoses and 18 or 24 month frequency for gasket inspection for more than ten years and no degradation leading to a loss of function has been observed.

In LRA Section B2.1.13, the applicant stated an exception to GALL AMP XI.M27 to perform hydrostatic test of power block fire hoses every three years and inspection of gaskets every 18 or 24 months because plant operating experience has demonstrated that the extended testing frequencies have been adequate to prevent system failures. However, the GALL Report program specifically states that fire hydrant hose hydrostatic tests, gasket inspections, and fire hydrant flow tests, should be performed annually to ensure that fire hydrants can perform their intended function and provide detection of degradation before a loss of intended function can occur.

Provide additional justification for performing the hydrant hose hydrostatic tests every 3 years and gasket inspections every 18 or 24 months, including inspection results, corrective actions taken to mitigate aging degradation, and describe whether these results were used for trending and adjustment of testing frequency.

RAI B2.1.13-2

GALL AMP XI.M27, "Fire Water Program," recommends periodic flow testing of the fire water system or wall thickness evaluations (e.g., volumetric or visual inspections) be performed to ensure that the system maintains its intended function; and that these inspections be performed before the end of the current operating term and at plant-specific intervals thereafter during the period of extended operation. GALL AMP XI.M27 also states that if an applicant chooses to perform visual inspections, these inspections must be capable of evaluating (1) wall thickness to ensure against catastrophic failure, and (2) the inner diameter of the piping as it applies to the design flow of the fire protection system. The applicant's current visual inspection frequency for firewater piping, valves, and fire hydrants is once every 18 months.

In LRA Section B2.1.13, the applicant discusses an enhancement to GALL AMP XI.M27 to revise procedures to include either periodic, non-intrusive volumetric examinations (e.g., ultrasonic or eddy current) or visual inspections of fire water system piping to ensure these inspections are suitable to identify evidence of loss of material due to corrosion and to ensure that wall thickness is within acceptable limits.

During its review of plant specific operating experience, the staff noted several examples of corrosion damage to above ground firewater piping, valves, and fire hydrants, including through wall leaks that have been identified at the applicant's current visual inspection frequency of 18 months. The staff also noted that the applicant's underground firewater piping does not have cathodic protection and is currently not periodically inspected.

It is not clear to the staff that the enhancement discussed in LRA Section B2.1.13 includes inspections of below ground firewater piping. Also, given the plant-specific operating history (discussed above), the staff questions the suitability of maintaining an 18-month inspection frequency.

Clarify whether the enhancement discussed in LRA Section B2.1.13 includes inspections of below ground firewater piping. Also, provide additional detail as to the basis for maintaining an 18-month inspection frequency, given the above plant-specific operating history.

Letter to John Conway from Kimberly Green dated May 18, 2010

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RELATED TO THE REVIEW OF THE DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION SET 1 FIRE PROTECTION PROGRAMS (TAC NOS. ME2896 AND ME2897)

DISTRIBUTION:

HARD COPY:
DLR RF

E-MAIL:
PUBLIC
RidsNrrDlr Resource
RidsNrrDlrRpb1 Resource
RidsNrrDlrRpb2 Resource
RidsNrrDlrRarb Resource
RidsNrrDlrRapb Resource
RidsNrrDlrRasb Resource
RidsNrrDlrRerb Resource
RidsNrrDlrRpob Resource
RidsOgcMailRoom Resource

N. Ferrer
K. Green
A. Stuyvenberg
D. Wrona
A. Wang
M. Peck, RIV
T. Brown, RI
G. Miller, RIV
N. O'Keefe, RIV
I. Couret, OPA
V. Dricks, OPA
W. Maier, RIV
J. Weil, OCA
E. Williamson, OGC
S. Uttal, OGC
R. Rihm, EDO

Diablo Canyon Nuclear Power Plant
Units 1 and 2

cc:

Chairman
San Luis Obispo County Board of
Supervisors
1055 Monterey Street, Suite D430
Room 370, County Government Center
San Luis Obispo, CA 93408

Mr. James R. Becker, Site Vice President
Pacific Gas & Electric Company
Diablo Canyon Nuclear Power Plant
P.O. Box 3, Mail Station 104/6/601
Avila Beach, CA 93424

Ms. Jennifer Post, Esq.
Pacific Gas & Electric Company
77 Beale Street, Room 2496
Mail Code B30A
San Francisco, CA 94120

Mr. Terence L. Grebel
Manager, Regulatory Projects
Diablo Canyon Nuclear Power Plant
P.O. Box 56
Avila Beach, CA 93424

Mr. Truman Burns
Mr. Robert Kinosian
California Public Utilities Commission
505 Van Ness, Room 4102
San Francisco, CA 94102

Mr. James D. Boyd, Commissioner
California Energy Commission
1516 Ninth Street (MS 31)
Sacramento, CA 95814

Mr. Brian Hembacher
Deputy Attorney General
300 South Spring Street, Suite 1702
Los Angeles, CA 90013

Ms. Susan Durbin
1300 I Street
P.O. Box 944255
Sacramento, CA 94244-2550

Mr. Eric Green
505 Van Ness Avenue
San Francisco, CA 94102-3214

Ms. Barbara Byron
Senior Policy Advisor
California Energy Commission
1516 9th Street, MS 36
Sacramento, CA 95814

Mr. Kevin Bell
General Council
California Energy Commission
1516 9th Street, MS 36
Sacramento, CA 95814

Ms. Rachel MacDonald
Nuclear Policy Advisor
California Energy Commission
1516 9th Street, MS 36
Sacramento, CA 95814

Ms. Jane Swanson
San Luis Obispo Mothers for Peace
P.O. Box 3608
San Luis Obispo, CA 93403

Ms. Rochelle Becker, Executive Director
Alliance for Nuclear Responsibility
P.O. Box 1328
San Luis Obispo, CA 93406-1328

Diablo Canyon Independent Safety
Committee
Office of the Legal Counsel
857 Cass Street, Suite D
Monterey, CA 93940