DiabloCanyonNPEm Resource

From: Ferrer, Nathaniel
Sent: Thursday, August 05, 2010 11:52 AM
To: Grebel, Terence; Soenen, Philippe R
Cc: DiabloHearingFile Resource
Subject: RAI Letter dated August 3, 2010
Attachments: RAI Related to the Review of the DCPP LRA - (Set 16) Aging Management Review and Aging Management Programs.pdf

Terry and Philippe,

Attached is an electronic copies of RAI Letter dated August 3, 2010. Formal copies are being sent via mail.

Nathaniel Ferrer
Project Manager
Division of License Renewal
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
(301)415-1045

Hearing Identifier: DiabloCanyon_LicenseRenewal_NonPublic
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Subject: RAI Letter dated August 3, 2010
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From: Ferrer, Nathaniel

Created By: Nathaniel.Ferrer@nrc.gov

Recipients:
"DiabloHearingFile Resource" <DiabloHearingFile.Resource@nrc.gov>
Tracking Status: None
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Tracking Status: None

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

August 3, 2010

Mr. 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 (TAC NOS. ME2896 AND ME2897)–AGING MANAGEMENT REVIEW AND AGING MANAGEMENT PROGRAMS

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 301-415-1045 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

cc w/encl: Distribution via Listserv

Diablo Canyon Nuclear Power Plant, Units 1 and 2
License Renewal Application
Request for Additional Information Set 16
Aging Management Review/Aging Management Programs

RAI 3.2.2.3.4-1

The Generic Aging Lessons Learned (GALL) Report, under item VII.G-9, indicates that copper alloy piping, piping components and piping elements exposed to condensation (internal) results in a loss of material, pitting and crevice corrosion, and the applicant should implement a plant-specific aging management program (AMP) to manage the aging effect.

The Diablo Canyon Nuclear Power Plant license renewal application (LRA) Table 3.2.2-4 indicates that the copper alloy heat exchanger tube components are exposed to plant indoor air (internal). LRA Table 3.2.2-4 also indicates that the copper alloy >15% Zn valve components are exposed to internal ventilation atmosphere and that the copper alloy >15% Zn valve components are exposed to internal plant indoor air. For each of the three component/environment scenarios, the LRA uses Note G, along with a plant-specific note that states "Condensation can occur but rarely. Component surfaces are normally dry." LRA Table 3.0-1 defines plant indoor air and ventilation atmosphere as "evaluated with the NUREG-1801 environment of condensation when the air contains significant amounts of moisture (enough to cause loss of material)." Since there is no AMP assigned to these components, it is not clear how the applicant will monitor to ensure that condensation does not form.

Provide additional information to indicate that the moisture level is being monitored in these systems to ensure that condensation does not form or provide prior historical evidence that would show that condensation does not occur with these components and environmental conditions.

RAI B.2.1.18-2

The LRA states that the Buried Piping and Tanks Inspection Program is a new program with two exceptions and no enhancements and is consistent with the program elements in GALL AMP XI.M34. This AMP addresses buried piping (i.e., piping in direct contact with soil). The LRA also states that the External Surfaces Monitoring Program is a new program with three exceptions and no enhancements and is consistent with the program elements in GALL AMP XI.M36. This AMP addresses aging management of the external surfaces of piping exposed to air, which would normally include underground inaccessible piping (i.e., piping not in direct contact with soil, but located below grade in a vault, pipe chase, or other structure where it is exposed to air and where access is limited).

There have been a number of recent industry events involving leakage from buried and underground piping and tanks.

In light of this recent industry operating experience (OE), the staff is concerned about the possible susceptibility to failure of buried and/or underground piping that are within the scope of license renewal and subject to an aging management review (AMR). In reviewing the AMPs

ENCLOSURE

cited above along with the applicable AMR items associated with them, the staff is not clear whether: (1) the components addressed by these AMPs clearly include both buried and underground piping (piping which is below grade and contained in a vault or other structure where it is exposed to air and where access is limited); and (2) whether such programs are being updated to incorporate lessons learned from these recent events as well as any OE from the applicant's own history.

1. Provide a discussion of how or whether the AMPs used in managing the aging of buried, underground, and limited access piping and tanks within the scope of license renewal will address recent industry OE as well as any OE from the applicant's own history.
2. If there are proposed changes as a result of the review of recent industry OE related to buried pipe, state how many excavations will be conducted during the ten year period prior to extended operation and in the period following the period of extended operation and minimum length of piping that will be exposed. State what percentage of the total length of piping these excavations will reveal.
3. If any proposed changes entail other methods of examining the pipe than excavations and direct visual inspection of the coating and/or piping surface, state what those methods will be and state what percentage of the total length of piping will be examined.
4. For the following in-scope systems, provide a discussion on whether cathodic protection will be provided for each and the extent of cathodic protection. Provide a discussion of the testing of the cathodic protection used since the pipe was first buried:

Saltwater & Chlorination	3.3.2-3
Make-up Water	3.3.2-5
Fire Protection	3.3.2-12
Diesel Fuel Oil	3.3.2-13

RAI B2.1.37-1

With respect to LRA Nickel-Alloy Aging Management Program element 5 "monitoring and trending," verify that volumetric and/or surface examinations will be performed in accordance with MRP-139 for reactor vessel inlet and outlet nozzles, as identified in the program description of this AMP.

August 3, 2010

Mr. 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 (TAC NOS. ME2896 AND ME2897) – AGING MANAGEMENT REVIEW AND AGING MANAGEMENT PROGRAMS

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Sincerely,

/RA/

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

cc w/encl: Distribution via Listserv

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DATE	08/02/10	07/29/10	08/03/10	08/03/10

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Letter to John Conway from Nathaniel B. Ferrer dated August 3, 2010

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

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