



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

November 19, 2010

LICENSEE: Energy Northwest

FACILITY: Columbia Generating Station

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON OCTOBER 26, 2010, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND ENERGY NORTHWEST, CONCERNING THE DRAFT REQUEST FOR ADDITIONAL INFORMATION PERTAINING TO THE COLUMBIA GENERATING STATION, LICENSE RENEWAL APPLICATION (TAC NO. ME3058)

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Energy Northwest (the applicant), held a telephone conference call on October 26, 2010, to discuss and clarify the NRC's draft request for additional information (D-RAI) concerning the Columbia Generating Station, license renewal application.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains a listing of the D-RAIs discussed with the applicant, including a brief description on the status of the items.

The applicant had an opportunity to comment on this summary.

A handwritten signature in cursive script that reads "Evelyn Gettys".

Evelyn Gettys, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosures:
As stated

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**TELEPHONE CONFERENCE CALL
COLUMBIA GENERATING STATION LICENSE RENEWAL APPLICATION**

**LIST OF PARTICIPANTS
October 26, 2010**

PARTICIPANTS

Evelyn Gettys

Ching Ng

Bill Holston

Omesh Chopra

Abbas Mostala

Scott Wood

Marsh Eades

David Lee

Mike Carter

AFFILIATIONS

U.S. Nuclear Regulatory Commission (NRC)

NRC

NRC

ANL

Energy Northwest (EN)

EN

EN

AREVA

AREVA

**TELEPHONE CONFERENCE CALL
COLUMBIA GENERATING STATION
LICENSE RENEWAL APPLICATION**

October 26, 2010

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Energy Northwest (the applicant), held telephone conference calls on October 26, 2010, to discuss the following draft requests for additional information (D-RAIs) concerning the Columbia Generating Station (Columbia), license renewal application (LRA).

D-RAI 4.3-02

In its review the staff noted that the applicant had listed the generic incore housing penetration cumulative usage factor (CUF) analysis in earlier versions of the basis documents but did not provide any other details regarding the analysis. The staff also noted that 10 CFR 54.3 defines a time limited aging analysis (TLAA) as those licensee calculations and analyses that involve conclusions or provide the basis for conclusions related to the capability of the system, structure, and component to perform its intended functions, as delineated in CFR 54.4(b), or are contained or incorporated by reference in the current licensing basis. If the generic incore penetration CUF analysis was included in the design basis document, it is not clear to the staff why it was later deleted from the basis documents. The applicant did not provide a justification for this action.

Question

Provide details regarding the generic incore housing penetration CUF analysis and clarify whether the generic analysis bounded the severity and number of transients for the Columbia incore housing penetrations. Also, provide justification for deleting the incore housing CUF analysis from the Columbia basis documents.

Discussion: The staff discussed with the applicant why the LRA states a TLAA for the incore housing penetrations in Appendix C, but not in LRA Section 4.3. The applicant explained that there is not a TLAA but a generic analysis report that was sent out by the manufacture GE. The reference in Appendix C to a TLAA is incorrect.

D-RAI 4.3-08

For all locations listed in LRA Table 4.3-6 other than the feedwater (FW) nozzle locations, the dissolved oxygen (DO) concentrations considered in the F_{en} calculations are acceptable because the applicant has used either conservative values or values consistent with the plant operating water chemistry data. However, the DO concentrations for the FW nozzle locations stated in the applicant's responses to requests for additional information (RAIs) 4.3-07 and 4.3-08 seem to be inconsistent with each other and with the F_{en} values listed in LRA Table 4.3-6. For example, the staff noted that the DO level in the FW piping during both normal water chemistry (NWC) and hydrogen water chemistry (HWC) operation is >50 ppb and in the reactor vessel shell region is 87 and 1 ppb during NWC and HWC operation. The applicant has correctly assumed DO values >50 ppb for the nickel alloy FW nozzle safe-end for both water chemistries, and the F_{en} values are consistent with this assumption. However, the DO value

ENCLOSURE 2

listed in the Table presented in the applicant's response to RAI 4.3-07 lists a value of <50 ppb for HWC condition. This value is inconsistent with the plant data. Also, the basis for assuming a DO value of 40 ppb and not ≥ 50 ppb for the FW nozzle shell junction (i.e., blend radius) is not clear to the staff. A value <50 ppb would be non-conservative for low-alloy steel, and seems to be inconsistent with the minimum F_{en} listed in LRA Table 4.3-6; for <50 ppb DO, F_{en} would be 2.55 and not 3.04 listed in the LRA.

Question

(a) Clarify if DO concentration for the nickel-alloy FW nozzle safe end under HWC conditions was assumed in F_{en} calculations to be >50 ppb or <50 ppb. If it was conservatively assumed to be <50 ppb, correct the DO value for FW nozzle safe end in Table 1 of Columbia's response to RAI 4.3-08.

(b) Considering a measured DO value of 54 ppb in the FW piping under HWC conditions, justify using a non-conservative value of 40 ppb DO for low-alloy steel FW nozzle shell junction blend radius in Columbia's response to RAIs 4.3-07 and 4.3-08.

Discussion: The staff discussed with the applicant the use of greater than 50 ppb or less than 50 ppb. The applicant stated that the less than 50 ppb was a typo and will correct that in their response.

D-RAI Cumulative Fatigue Damage AMR

As stated in LRA Section 4.3.4, all non-Class 1 components are part of the aging management review (AMR), and fatigue analysis of these components is accomplished by a stress range reduction factor. Therefore, LRA Tables 3.2.2-X, 3.3.2-X, and 3.4.2-X should include any AMR items related to TLAA for managing cumulative fatigue damage of non-Class 1 components.

Question

LRA Tables 3.2.2-X, 3.3.2-X, and 3.4.2-X with the AMR results, include any AMR items related to TLAA for managing cumulative fatigue damage of non-Class 1 components. What was the reasoning for not listing the TLAA's?

Discussion

The staff will issue a formal RAI.

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Memorandum to Energy Northwest from Evelyn H. Gettys dated November 19, 2010

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