October 4, 2010

LICENSEE: Energy Northwest

FACILITY: Columbia Generating Station

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON SEPTEMBER 13, 2010, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND ENERGY NORTHWEST, CONCERNING THE 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 (EN), held a telephone conference call on September 13, 2010, to discuss and clarify the NRC's request for additional information (RAI) concerning the Columbia Generating Station, license renewal application (LRA). The telephone conference call was useful in clarifying the intent of the staff's RAIs.

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.

/RA/

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

Docket No. 50-397

Enclosure:
As stated

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TELEPHONE CONFERENCE CALL
COLUMBIA GENERATING STATION
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS
September 13, 2010

PARTICIPANTS	**AFFILIATIONS**
Evelyn Gettys	U.S. Nuclear Regulatory Commission (NRC)
Bill Holston	NRC
Robert Sun	NRC
Yiming Pan	Center (NRC contactor)
Abbas Mostala	Energy Northwest (EN)
Marsha Eades	EN
John Twomey	EN
Janet Worthington	EN
Ryan Oakes	EN

ENCLOSURE 1

TELEPHONE CONFERENCE CALL
COLUMBIA GENERATING STATION
LICENSE RENEWAL APPLICATION

September 13, 2010

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Energy Northwest, held a telephone conference call on September 13, 2010, to discuss and clarify the following requests for additional information (RAIs) concerning the Columbia Generating Station, license renewal application (LRA).

Above ground Steel Tanks AMP Follow-up RAI
Draft RAI B.2.1-3

Background:

RAI B.2.1-1 requested the applicant to justify why there are no apparent compensatory inspections to detect potential corrosion of the tank bottom surface of the condensate storage tanks due to water and moisture intrusion penetrating the tank and concrete interface given that there is no sealant or caulking at this interface edge as recommended by GALL AMP XI.M29. In its response dated August 26, 2010, the applicant stated that the condensate storage tanks have a preventive maintenance task to perform a visual and ultrasonic thickness measurement of the tank bottoms every ten years.

Issue:

The staff lacks sufficient information to evaluate that, given the lack of sealant or caulking at the interface between the tank and concrete foundation, whether the ten year frequency of the preventive maintenance task is adequate to detect degradation before it impacts the ability of the tank to meet its current licensing basis function(s).

Request:

Provide additional justification supporting a ten year frequency for performing the tank bottom inspection preventive maintenance activity (e.g., plant-specific operating experience from previous inspections).

Discussion: The staff discussed this draft RAI with the applicant. The applicant will provide a response as requested.

Compressed Air Monitoring
RAI B.2.2-3

<u>Background</u>

GALL Report Table 3, line item 53 indicates that steel piping, piping components, and piping elements exposed to condensation can undergo loss of material due to corrosion, and GALL AMP XI.M24, “Compressed Air Monitoring” is recommended for managing the aging effect.

Furthermore, the GALL AMP XI.M24 recommends the use of visual inspections, air quality monitoring, etc., to verify proper operation of the compressed air system and to ensure timely detection of loss of material due to corrosion.

LRA Table 3.3.2-10, Row Numbers 5, 7, 9, and 11 indicate that steel piping and valve bodies internally exposed to dried air are not subject to aging effects that require management. The LRA references the GALL Report item VII.J-22 for consistency and attributes the AMR results to AMP B.2.2, Air Quality Sampling Program. In addition, the LRA states that AMP B.2.2 is an existing, plant-specific program and includes periodic sampling for air quality in the Control Air System. The LRA also states that the other portions of GALL AMP XI.M24 are not applicable.

Issue

As discussed in the references included in GALL AMP XI.M24, aging effects such as loss of material due to corrosion have been a contributor to compressed air system failures. While AMP B.2.2 performs periodic air quality sampling, the LRA does not provide sufficient detail for the staff to understand how a dried air (internal) environment will be maintained and/or verified for compressed air system related piping, piping components, and piping elements in the event that the air driers were isolated or bypassed due to a system perturbation, to support maintenance activities, or during an outage.

Request

For compressed air system related piping, piping components, and piping elements identified as being exposed to a “dried air (internal)” environment, describe how a dried air environment will be maintained and/or verified in the event that the air driers were isolated or bypassed due to a system perturbation, to support maintenance activities, or during an outage.

Discussion: The staff discussed the draft RAI with the applicant. The applicant described their system which the staff will review when the responses are received.

Generic RAI on Submerged Inaccessible Low-Voltage Cables
Revised B.2.32-4 – this replaces B.2.32-4 from letter ML102300229 dated August 26, 2010

Background:

NUREG-1801, Rev. 1, “Generic Aging Lessons Learned,” (the GALL Report) addresses inaccessible medium-voltage cables in Aging Management Program (AMP) XI.E3, “Inaccessible Medium Voltage Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements.” The purpose of this program is to provide reasonable assurance that the intended functions of inaccessible medium-voltage cables (2 kV to 35 kV), that are not subject to environmental qualification requirements of 10 CFR 50.49 and are exposed to adverse localized environments caused by moisture while energized, will be maintained consistent with the current licensing basis. The scope of the program applies to inaccessible (in conduits, cable

trenches, cable troughs, duct banks, underground vaults or direct buried installations) medium-voltage cables within the scope of license renewal that are subject to significant moisture simultaneously with significant voltage.

The application of AMP XI.E3 to medium-voltage cables was based on the operating experience available at the time Revision 1 of the GALL Report was developed. However, recently identified industry operating experience indicates that the presence of water or moisture can be a contributing factor in inaccessible power cables failures at lower service voltages (480 V to 2 kV). Applicable operating experience (OE) was identified in licensee responses to Generic Letter (GL) 2007-01, "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients," which included failures of power cable operating at service voltages of less than 2 kV where water was considered a contributing factor.

Recently identified industry operating, provided by the NRC licensees in response to GL 2007-01, has shown that there is an increasing trend of cable failures with length in service beginning in the 6^{th} through 10^{th} years of operation and also that moisture intrusion is the predominant factor contributing to cable failure. The staff has determined, based on the review of the cable failure distribution, that annual inspection of manholes and cable testing frequency of at least every 6 years is a conservative approach to ensuring the operability of power cables and, therefore, should be considered.

In addition, recently identified industry operating experience has shown that some NRC licensees may experience events, such as flooding or heavy rain, that subject cables within the scope of program for GALL Report XI.E3 to significant moisture. The staff has determined that event driven inspections, in addition to a 1 year periodic inspection frequency, is a conservative approach and, therefore, should be considered.

Issue:

The staff has concluded, based on recently identified industry operating experience concerning the failure of inaccessible low-voltage power cables (480 V to 2 kV) in the presence of significant moisture, that these cables can potentially experience age related degradation. The staff noted that the applicant's Inaccessible Medium-Voltage Cables Program does not address inaccessible low voltage power cables (400 V (Nominally 480 V) to 2 kV inclusive). In addition, increased cable test and inspection frequencies (6 and 1 years respectively) should be evaluated to ensure that the Inaccessible Medium-Voltage Cables Program test and inspection frequencies reflect industry and plant-specific operating experience and that test and inspection frequencies may be increased based on future industry and plant-specific operating experience.

Request:

1. Provide a summary of your evaluation of recently identified industry operating experience and any plant-specific operating experience concerning inaccessible low- voltage power cable failures within the scope of license renewal (not subject to 10 CFR 50.49 environmental qualification requirements), and how this operating experience applies to the need for additional aging management activities at your plant for such cables.

2. Provide a discussion of how Columbia will manage the effects of aging on inaccessible low-voltage power cables within the scope of license renewal and subject to aging management review; with consideration of recently identified industry operating experience and any plant-specific operating experience. The discussion should include assessment of your aging management program description, program elements (i.e., Scope of Program, Parameters Monitored/Inspected, Detection of Aging Effects, and Corrective Actions), and FSAR summary description to demonstrate reasonable assurance that the intended functions of inaccessible low-voltage power cables subject to adverse localized environments will be maintained consistent with the current licensing basis through the period of extended operation.

3. Provide an evaluation showing that the Inaccessible Medium-Voltage Cables Program test and inspection frequencies, including event driven inspections, incorporate recent industry and plant-specific operating experience for both inaccessible low- and medium-voltage cable. Discuss how the Inaccessible Medium Voltage Program will ensure that future industry and plant-specific operating experience will be incorporated into the program such that inspection and test frequencies may be increased based on test and inspection results.

Discussion: The staff discussed with the applicant operating experience at the CGS and the inspection frequency of maintenance programs for inaccessible cable. The applicant will provide a response.

Letter to Energy Northwest from Evelyn H. Gettys dated October 04, 2010.

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