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

November 19, 2010

Mr. S.K. Gambhir
Vice President Technical Services
Columbia Generating Station
Energy Northwest
MD PE04
P.O. Box 968
Richland, WA 99352-0968

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE COLUMBIA GENERATING STATION, LICENSE RENEWAL APPLICATION (TAC NO. ME3058)

Dear Mr. Gambhir:

By letter dated January 19, 2010, Energy Northwest submitted an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54 (10 CFR Part 54), to renew operating license NPF-21 for Columbia Generating Station, 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. Further requests for additional information may be issued in the future.

Items in the enclosure were discussed with Abbas Mostala 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 301-415-4029 or by e-mail at Evelyn.Gettys@nrc.gov.

Sincerely,

Evelyn Gettys

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

Docket No. 50-397

Enclosure:
As stated

cc w/encl: Distribution via Listserv

COLUMBIA GENERATING STATION
LICENSE RENEWAL APPLICATION
REQUEST FOR ADDITIONAL INFORMATION

Follow-up RAI B.2.34-1

Background:

In response to the RAI B.2.34-1, the applicant stated:

a. "Additionally, the sand pocket drains are checked monthly (28 day frequency) for presence of water."
b. "Based on plant specific corrosion rates for carbon steel exposed to raw water (i.e., SW piping) the maximum average corrosion rate is 1.5 mils per year (mpy). Therefore, a corrosion of 1.5 mpy will be assumed for containment steel plate in the sand pocket region."
c. "The 1.9% margin when applied to the thickness of the plate in the sand bed region will result in a corrosion allowance of 27.5 mils."
d. "The construction of the containment at Columbia utilized a polyurethane foam material in the annulus between the biological shield wall and primary containment vessel. Energy Northwest agrees this method of construction would inhibit, if not prevent, the free flow of moisture to the sand pocket regions and drain lines from the refueling bellows area."

Issue:

It is not clear to staff:

a. How the sand pocket drains are inspected for presence of water.
b. How the plant specific corrosion rate of 1.5 mpy was established.
c. How the corrosion rate in the sand bed region can be linearly proportional to the drywell thickness.

In addition, presence of moisture in the polyurethane material can lead to corrosion and localized pitting of the steel containment. The localized corrosion rate due to pitting can be higher than 1.5 mpy over the long term.

Request:

a. Provide details on how the sand pocket drains are inspected. In addition, does the plant procedures require vacuum of all of the eight sand pockets during inspection.
b. Provide the basis for the plant specific corrosion rate of 1.5 mils per year (mpy).
c. Justification for assuming that corrosion rate in sand bed region is linearly proportional to the drywell thickness.
d. Plans (if any) for UT examination of a representative portion of the steel containment and sand pocket region to detect degradation of steel and confirm that corrosion rate is less than 1.5 mils per year (mpy).

ENCLOSURE

Follow-up RAI B.2.34-3

Background:

In response to RAI B.2.34-3, the applicant stated that the VT-3 examinations are performed in accordance with the plant procedures by certified VT-3 examiners. The procedures and certification are in accordance with ASME Section XI.

Issue:

10CFR 50.55a which is referenced in GALL XI.S1 states that VT-1 and VT-3 examinations must be conducted in accordance with IWA-2200. Personnel conducting examinations in accordance with the VT-1 or VT-3 examination method shall be qualified in accordance with IWA-2300. The "owner-defined" personnel qualification provisions in IWE-2330(a) for personnel that conduct VT-1 and VT-3 examinations are not approved for use. It is not clear to the staff whether the persons performing the VT-3 examination at the Columbia Generating Station are qualified in accordance with the IWA-2300 requirements.

Request:

Provide the qualification requirements for the VT-3 examiners at the Columbia Generating Station. Specifically, the staff needs to know if the VT-3 examiners are qualified in accordance with ASME IWA-2300.

Follow-up RAI B.2.35-2

Background:

In its response to RAI B.2.35-2, dated September 3, 2010, the applicant stated that no inspection frequency is specified when applying supplemental examinations per IWF-3200. The applicant also stated that when visual examinations detect conditions in the structural steel supports of the service water pond spray ring header requiring evaluation, these examinations may be supplemented with other examination methods to determine the characteristic of the flaw. Supplement examinations, if needed, are performed by either or both the surface and volumetric methods. The applicant further stated that the structural steel supports of the spray ring header are protected from corrosion by coating the structure and a sacrificial anode protective system. The effectiveness of the corrosion protection system is assessed periodically by performing above-water and below-water visual inspections of the structural supports. Additionally, the operation of the anode protective system is verified periodically. The criterion to initiate the corrective action process, in accordance with plant procedures, is, "Identify any issue or condition that doesn't look as if it is right using the AR-CR process."

Issue:

The staff reviewed the applicant's response to RAI B.2.35-2 and was concerned that the applicant did not provide the frequency of the periodic inspection of the service water pond spray ring header supports and the anode protective systems. In addition, the criterion used to initiate the corrective action process was very subjective.

Request:

The applicant is requested to provide the inspection frequency for the above and below water inspection of service water pond spray header supports, and anode protection system. In addition, the applicant to identify quantitative criteria used to initiate the corrective action process. The staff needs this information to confirm that the effects of aging on the intended function of the spray pond header will be adequately managed for the period extended operations in accordance with 10 CFR 54.21(c)(iii).

Follow-up RAIs B.2.50-1, B2.50-2, B.2.50-3

Background:

In response to RAIs B.2.50-1, B2.50-2, B.2.50-3, the applicant stated that the required enhancements to AMPs will be implemented prior to the period of extended operation. In addition, it is not clear from the response which of the recommended enhancements will be adopted for the AMPs.

Issue:

The staff is concerned that the required enhancements to the AMPs will not be implemented until the period of extended operation which begins December 2023. Early implementation of the enhancements is needed to establish a baseline for monitoring and trending the aging of the structures during the period of extended operation. In addition, the applicant has not clearly identified the recommended enhancements that will be incorporated in the AMPs.

Request:

a. Clearly identify the enhancements that will be incorporated into the AMPs.
b. Provide a firm schedule for implementation of the required enhancements, in order to establish a baseline prior to the period of extended operation. If no plans exist to implement the enhancements prior to the period of extended operation explain why early implementation is unnecessary and how an appropriate baseline will be established prior to entering the period of extended operation.

Follow-up RAI B.2.50-5

Background:

In response to RAI B.2.50-5, the applicant stated that tell tale drains are checked once per shift, during 12 hours shift, in accordance with plant procedures. The acceptance criterion is no flow through the drains. Should the operator find flow in the tell tale drains, the event would be entered into CAP. As of August 2010, no instances of leakage through tell tale drains have been entered into CAP.

Issue:

The staff is concerned that tell tale drains may be blocked and prevent any leakage to be collected or observed at the drain valves.

Request:

Provide additional information that will demonstrate that tell tale drains are not blocked. This could be boroscope inspection of the drains.

November 19, 2010

Mr. S.K. Gambhir
Vice President Technical Services
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Sincerely,
/RA/
Evelyn H. Gettys, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosure:
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Letter to S.K. Gambhir from E. Gettys dated November 19, 2010

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE COLUMBIA GENERATING STATION, LICENSE RENEWAL APPLICATION (TAC NO. ME3058) CONCERNING STRUCTURES

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