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GO2-16-107

10 CFR 50.55a

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555-0001

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397  
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION (RAI)  
RELATED TO RELIEF REQUEST 4ISI-05 REGARDING REACTOR  
PRESSURE VESSEL FLANGE LEAK-OFF LINES AND CODE CASE N-805**

- References: 1. GO2-16-012 letter from Energy Northwest to NRC, dated February 17, 2016 (ADAMS Accession Number ML16054A797)
2. Email from NRC to Energy Northwest, dated July 7, 2016 (ADAMS Accession Number not yet assigned)

Dear Sir or Madam:

By Reference 1, Energy Northwest submitted relief request 4ISI-05 for approval.

Via Reference 2, the Nuclear Regulatory Commission (NRC) requested additional information related to Energy Northwest's submittal. Enclosure 1 provides the requested information.

This letter and its attachment contain no new regulatory commitments. If there are any questions or if additional information is needed, please contact Ms. L. L. Williams, Licensing Supervisor, at 509-377-8148.

Executed this 2nd day of August, 2016.

Respectfully,

A. L. Javorik  
Vice President, Engineering

Enclosure:           As stated

cc:    NRC Region IV Administrator  
      NRC NRR Project Manager  
      NRC Sr. Resident Inspector - 988C  
      CD Sonoda – BPA 1399 (email)  
      WA Horin - Winston & Strawn

## **RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

### **NRC Request 1:**

What actions will be taken when using the proposed alternative to ensure the leak-off lines are clear of air prior to performance of the VT-2 examination?

### **Energy Northwest Response to RAI 1:**

Similar to the previous examination, main steam (MS) valves (V) MS-V-753, MS-V-764, MS-V-13 and MS-V-14, are manipulated and demineralized water added, as necessary to fill and vent the line to ensure the lines are clear of air.

### **NRC Request 2:**

The NRC staff would like to verify that the Class 1 portion of the head leak-off line will continue to be VT-2 examined each refueling outage in accordance with IWB-5222(a) and Inspection Item No. B15.10.

### **Energy Northwest Response to RAI 2:**

The Class 1 portion of the head leak-off line will continue to be VT-2 examined to detect for evidence of leakage, each refueling outage in accordance with IWB-5222(a) and Inspection Item No. B15.10. The test is performed just prior to reactor start-up with the reactor head installed, therefore the head leak-off line is isolated by the head seal and may be drained of water, to support operation of MS-PS-34. Under these conditions and in accordance with IWB-5222(a), Class 1 components are examined to the second closed valve at the boundary extremity. In the case of the head leak-off line there is no "second closed valve" so the line is VT-2 examined, to the Class 1 boundary extremities, MS-V-753 and MS-V-13.

### **NRC Request 3:**

According to the ASME Pressure Vessel Code, Section XI, Examination Category C-H, Table IWC-2500-1, Item C7.10, examinations are required to be performed each period. Section XI, Table IWB-2500-1, Examination Category Item B15.10 requires examination each refueling outage and Item B15.20 requires examination once per interval. Given that the methodology of the proposed alternative pressurizes both Class 1 and Class 2 portions of the head leak-off line simultaneously, and the staff believes this condition occurs every refueling outage will this methodology be used to pressure test and VT-2 examine the Class 2 portion each inspection period?

**Energy Northwest Response to RAI 3:**

The proposed methodology will be used to pressurize and VT-2 examine the Class 2 portion once each inspection interval. Performing both the Class 1 and Class 2 testing and examination at the same time once at the end or near the end of the interval will reduce dose as stated in Reference 1. As pointed out in Energy Northwest Response to RAI 1, the piping should be verified to be clear of air to ensure the test is valid. The valves are manually operated and therefore require direct manipulation to verify the line is full and vented. Columbia wishes to avoid the additional dose associated with this activity and seeks to perform this inspection of the Class 2 portion on the same frequency as the Class 1 portion, i.e. once every ten years as stated in the relief request. This is commensurate with the risk and significance of the Class 2 portion considering the piping and the Reactor Pressure Vessel (RPV) Seal have had no history of failures (as stated in Section 5 of Reference 1) and considering the Class 1 and Class 2 portions are in series thus both pipes see the same operating conditions and environments.

To summarize, under this relief request Columbia continues to examine all Class 1 components, including the seal leak detection line, each refueling outage in accordance with IWB-5222(a) and will examine the Class 1 and Class 2 portion of the seal leak detection line in accordance with the alternate proposed method once per interval .

**Reference:**

1. GO2-16-012 letter from Energy Northwest to NRC, dated February 17, 2016 (ADAMS Accession Number ML16054A797).