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May 17, 2016  
GO2-16-070

10 CFR 50.54(f)

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
11555 Rockville Pike  
Rockville, MD 20852

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397  
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION  
ASSOCIATED WITH EXPEDITED SEISMIC EVALUATION PROCESS  
SUBMITTAL**

References: 1) Letter, GO2-16-021, dated January 20, 2016, A. L. Javorik (Energy Northwest) to the NRC, " Expedited Seismic Evaluation Process (ESEP) Report In Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident"

2) NRC E-mail dated April 14, 2016, from S. Wyman (NRC) to L. L. Williams (Energy Northwest), "Columbia Generating Station ESEP Clarification Questions"

Dear Sir or Madam:

By Reference 1, Energy Northwest submitted the Expedited Seismic Evaluation Process report for Columbia Generating Station. By Reference 2, the Nuclear Regulatory Commission (NRC) requested additional information related to the Energy Northwest submittal. The attachment to this letter contains the requested information.

No new commitments are identified in this letter.

If you have any questions or require additional information, please contact Ms. L. L. Williams at (509) 377-8148.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on the 17<sup>th</sup> day of May, 2016

Respectfully,

A handwritten signature in black ink, appearing to read 'A. L. Javorik', written over a horizontal line.

A. L. Javorik  
Vice President, Engineering

Attachment: As stated

cc: NRC Region IV Administrator  
NRC Senior Resident Inspector/988C  
NRC NRR Project Manager  
C Sonoda – BPA/1399 (email)

### **Response to Request for Information**

In an e-mail, dated April 14, 2016, the Nuclear Regulatory Commission (NRC) provided the following request. The following clarification questions are raised in the context of the NRC evaluation of the ESEP submittals only and licensees' responses will be reviewed by NRC staff only to the extent the use of this information affects the elements and outcomes of the ESEP evaluation. As many licensees have used information from their ongoing SPRA analyses, the current review will not evaluate methods or results as they pertain to the SPRA. They will be reviewed later at the time of SPRA review.

#### **NRC Request No. 1:**

Although the licensee did not outline a Phase 3 core cooling strategy in their ESEP submittal, the Columbia OIP, dated February 28, 2013 states the license [sic] plans to establish shutdown cooling by using NSRC equipment to repower Residual Heat Removal and provide Service Water (SW) flow. Many Phase 3 components appear to be missing from the ESEL, including RHR pumps and valves, SW valves, and any electrical components necessary to connect the NSRC generator. Please add the components and support equipment necessary to meet the Phase 3 core cooling strategy to the ESEL and provide results per the ESEP guidance (e.g., HCLPF analysis results), or provide a justification for why they are not included on the ESEL (e.g., if the licensee can continue Phase 2 strategies indefinitely [not] [sic] using NSRC equipment).

#### **Energy Northwest Response:**

As discussed on the phone conference between the NRC and Energy Northwest staff on April 28, 2016, the Columbia OIP dated February 28, 2013, does not reflect the current Columbia Generating Station (Columbia) EA-12-049 mitigation strategy. The revised Columbia strategy does not use the Phase 3 NSRC equipment after the Phase 2 strategies are established as the NSRC equipment is not relied upon in the Diverse and Flexible Coping Strategies (FLEX) to sustain the critical functions of core cooling and containment integrity, or provide sufficient water inventory in the spent fuel pool to preclude fuel damage from loss of cooling. As a result the Phase 3 components were not included as part of the ESEL in the ESEP report. Columbia does have the necessary procedures in place to activate delivery, provide receipt of, and connect and operate the NSRC equipment if necessary.

As required by EA-12-049, the next submittal of the 6-month status report will reflect the current Columbia FLEX mitigation strategy.

**NRC Request No. 2:**

The licensee credits automatic realignment of RCIC suction from CST to SP; however, the CST and CST flowpath to RCIC are not credited or seismically robust. In the event that the CST remains intact, but the CST flowpath fails closed (or restricted), the automatic realignment on low CST level may not occur. Please clarify the plant's response in the event that the automatic realignment does not occur.

**Energy Northwest Response:**

The level switches, RCIC-LS-15A and RCIC-LS-15B, used in the RCIC system to monitor the condensate storage tank (CST) level and initiate the opening of the RCIC suppression pool suction isolation valve, RCIC-V-31, on low CST, are located on a Seismic Category 1 standpipe in the Reactor Building, not on the CST. Therefore, if the CST flowpath fails closed (or is restricted), the RCIC pump suction will cause the water level in the standpipe to decrease, and an automatic realignment on low CST level to the suppression pool will occur. In the event automatic realignment did not occur for some reason, the RCIC system would trip on low RCIC pump suction pressure. At that point, Operators would follow procedures to correct the cause of the trip. Since the cause of the trip is due to low suction pressure from the CST, the Operators would align the RCIC pump suction to the suppression pool. The Operators would then place RCIC in operation with suction from the suppression pool.