Alex L. Javorik
Columbia Generating Station
P.O. Box 968, PE04
Richland, WA 99352-0968
Ph. 509-377-8555 | F. 509-377-2354
aljavorik@energy-northwest.com

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GO2-17-060

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

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397 ADDITIONAL INFORMATION IN RESPONSE TO COLUMBIA'S MUR LAR: PRIMARY ELEMENT ACCURACY CALCULATION**

Reference: Letter from A. L. Javorik, Energy Northwest, to NRC, "Columbia Generating Station Docket 50-397 Response to Request for Additional Information, Columbia MUR LAR: EICB and SRXB," GO2-17-050, dated February 21, 2017.

Dear Sir or Madam:

By the above reference, Energy Northwest submitted its response to a request for additional information regarding a license amendment for Columbia Generating Station to recapture certain measurement uncertainties as a power uprate.

On February 27, 2017, a phone call between the Nuclear Regulatory Commission (NRC) staff and Energy Northwest discussed information contained in the reference and the NRC requested the details of the calculation for primary element accuracy discussed be formally submitted.

The enclosure to this letter contains the information requested.

The No Significant Hazards Consideration Determination provided in the original submittal is not altered by this submittal. This letter contains no regulatory commitments.

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 this 7th day of March, 2017.

Respectfully,

A. L. Javorik
Vice President, Engineering

Enclosure: As stated

cc: NRC RIV Regional Administrator
NRC NRR Project Manager
NRC Senior Resident Inspector/988C
CD Sonoda – BPA/1399 (email)
WA Horin – Winston & Strawn (email)
RR Cowley – WDOH (email) w/o enclosure
EFSECutc.wa.gov – EFSEC (email) w/o enclosure

This enclosure provides the supplemental Information for RAI-EICB-01 in support of the Columbia Generating Station's (Columbia) measurement uncertainty recapture (MUR) license amendment request (LAR) discussed during the February 27, 2017, phone call between the Nuclear Regulatory Commission (NRC) staff and Energy Northwest.

For the Columbia thermal power optimization (TPO) project, the following detail is provided to explain the primary element accuracy (PEA) error associated with the calculation of the Main Steam Line High Steam Flow Group 1 Isolation setpoint function.

Background

For the calculation of the allowable value (AV) and nominal trip setpoint (NTSP), the PEA instrument error changed from ±2% of rated TPO flow to ±0.75% of percent of Point (PoP) flow.

The PEA error is the random error in psid due to the flow changing by the specified venturi PoP error in % flow units around the AL [analytical limit]. Thus, in psid units, the PEA error is the difference between the flow Δp at the AL and the flow Δp at the AL changed by 0.75% of AL flow. For example, if the flow being measured is 140% of rated, the PEA error is ± 0.75% of 140% rated flow in % rated flow units, and the PEA error in psid units is the Δp corresponding to 140% rated flow minus the Δp corresponding to 140*(1 - 0.0075) = 138.95% rated flow.

Calculation

The PEA Error calculation is performed by subtracting the PEA case Δp from the Nominal case Δp.

Results:

Case	Dome Pressure (psia)	Steam Flow (%)	Δp (psid)	Error (psi)
Nominal	1035	140.00	145.37	
PEA	1035	138.95	142.35	3.02