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

**Subject: COLUMBIA GENERATING STATION, DOCKET NO. 50-397  
ERRATUM FOR RELIEF REQUESTS FOR THE COLUMBIA  
GENERATING STATION FOURTH TEN-YEAR INTERVAL INSERVICE  
TESTING PROGRAM**

**Reference: Letter, GO2-14-049, dated April 2, 2014, A. L. Javorik (Energy Northwest) to  
NRC, "Relief Requests for the Columbia Generating Station Fourth Ten-  
Year Interval Inservice Testing Program"**

Dear Sir or Madam:

Please replace Page 16 of 40 of Attachment 2 of the referenced letter with the enclosed page for relief request RP03. A subsequent review revealed a confusing statement regarding valve position indication. This statement has been removed since it was not material to the argument.

There are no new or revised commitments with this letter. If you should have any questions regarding this submittal, please contact Ms. L. L. Williams, Licensing Supervisor, at 509-377-8148.

Executed on 10/22/14

Respectfully,  
*DW Gregoire*  
D. W. Gregoire  
Manager, Regulatory Affairs

Enclosure: As stated

cc: NRC Region IV Administrator  
NRC NRR Project Manager  
NRC Sr. Resident Inspector - 988C  
MA Jones: BPA/1399

A047  
LRR



Relief Request – RP03 (Contd.)

**Impracticality of Compliance**

The establishment of specific reference values is impractical for these pumps.

**Burden Caused by Compliance**

Reference values are defined as one or more fixed sets of values of quantities as measured or observed when the equipment is known to be operating acceptably. All subsequent test results are to be compared to these reference values. Based on operating experience, flow rate (independent variable during inservice testing) for these pumps cannot be readily duplicated with the existing flow control systems. Flow control for these systems can only be accomplished through the operation of relatively large motor operated globe valves as throttling valves. The operator must repeatedly jog the motor operator to try to make even minor adjustments in flow rate. These efforts, to exactly duplicate the reference value, would require excessive valve manipulation which could ultimately result in damage to valves or motor operators.

**Proposed Alternative and Basis for Use**

As discussed above, it is impractical to return to a specific value of flow rate, or differential pressure for testing of these pumps. As stated in NUREG-1482, Rev 2 Section 5.2, some system designs do not allow for testing at a single reference point or a set of reference points. In such cases, it may be necessary to plot pump curves to use as the basis for variable reference points. Code Case OMN-16, "Use of a Pump Curves for Testing," is included in draft Revision 1 of RG 1.192, "Operations and Maintenance Code Case Acceptability, ASME OM Code."

Since the independent reference variable (flow rate) for these pumps is impractical to adjust to a fixed reference value and requires excessive valve manipulation, the maximum variance shall be limited to  $\pm 2\%$  of the reference value. Thus, flow rate shall be adjusted to be within  $\pm 2\%$  of the reference flow rate and the corresponding differential pressure shall be measured and compared to the reference differential pressure value determined from the pump reference curve established for this narrow range of flow rate. Slope of the pump reference curve is not flat even over this narrow range of flow rate. Assuming the flow rate to be fixed over this narrow range can result in additional error in calculating the deviation between the measured and reference differential pressure and at times this deviation can be non-conservative. Since the dependent variable (differential pressure) can be assumed to vary linearly with flow rate in this narrow range, establishing multiple reference points in this narrow range is similar to establishing a reference pump curve representing multiple reference points. This assumption of linearity between differential pressure and flow rate is supported by the manufacturer pump curves in the stable design flow rate region.

FOR INFO