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GO2-16-122

10 CFR 50.54(f)

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

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397;
RESPONSE TO GENERIC LETTER 2016-01 "MONITORING OF
NEUTRON-ABSORBING MATERIALS IN SPENT FUEL POOLS"**

Reference: NRC Generic Letter 2016-01, "Monitoring of Neutron-Absorbing
Materials in Spent Fuel Pools," dated April 7, 2016

Dear Sir or Madam:

The Nuclear Regulatory Commission (NRC) issued the referenced Generic Letter (GL) 2016-01, to address degradation of neutron-absorbing materials in wet storage systems for reactor fuel at power and non-power reactors. The NRC is requesting "that addressees submit information, or provide references to previously docketed information, which demonstrates that credited neutron-absorbing materials in the spent fuel pool (SFP) of power reactors . . . are in compliance with the licensing and design basis, and with applicable regulatory requirements; and that there are measures in place to maintain this compliance." Additionally, the NRC seeks to collect the requested information and determine if additional regulatory action is required.

The NRC requested each licensee submit a written response in accordance with 10 CFR 50.54(f) within 210 days of the date of the GL. Attachment 1 to this letter contains Energy-Northwest's response to the NRC's request in GL 2016-01 for Columbia Generating Station (Columbia).

There are no new commitments made in this submittal.

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 31 day of AUGUST, 2016.

Respectfully,

A handwritten signature in black ink that reads "David P. Brown for Alex Javorik". The signature is written in a cursive style.

A. L. Javorik
Vice President, Engineering

Attachment: As stated

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

RESPONSE TO GENERIC LETTER (GL) 2016-01

NRC REQUEST

Nuclear Regulatory Commission (NRC), Generic Letter (GL) 2016-01, requested each licensee submit a written response in accordance with 10 CFR 50.54(f) within 210 days of the date of the GL to provide the requested information summarized below:

- (1) a description of the neutron-absorbing material credited in the Spent Fuel Pool (SFP) nuclear criticality safety (NCS) analysis of record (AOR) and its configuration in the SFP;
- (2) a description of the surveillance or monitoring program used to confirm that the credited neutron-absorbing material is performing its safety function, including the frequency, limitations, and accuracy of the methodologies used;
- (3) a description of the technical basis for determining the interval of surveillance or monitoring for the credited neutron-absorbing material;
- (4) a description of how the credited neutron-absorbing material is modeled in the SFP NCS AOR and how the monitoring or surveillance program ensures that the actual condition of the neutron-absorbing material is bounded by the NCS AOR; and
- (5) a description of the technical basis for concluding that the safety function for the credited neutron-absorbing material in the SFP will be maintained during design-basis events.

The NRC provided four areas of categorization from which they would accept a response.

- Category 1: Power reactor addressees that do not credit neutron-absorbing materials other than soluble boron in the AOR.
- Category 2: Power reactor addressees that have an approved license amendment to remove credit for existing neutron-absorbing materials and that intend to complete full implementation no later than 24 months after the issuance of this GL.
- Category 3: Power reactor addressees that have incorporated their neutron-absorbing material monitoring programs into their licensing basis through an NRC-approved Technical Specification (TS) change or license condition.
- Category 4: All other power reactor addressees.

Category 3 includes “power reactor addressees that have incorporated their neutron-absorbing material monitoring programs into their licensing basis through an NRC-approved TS change or license condition. Those addressees may submit a response letter referencing their approved TS change or license condition and affirming that no change has been made to their neutron-absorbing material monitoring program, as described in the referenced license amendment request. If a change has been made since NRC approval of the reference, the response letter should also describe any such changes.” GL 2016-01.

ENERGY NORTHWEST RESPONSE:

Columbia Generating Station (Columbia) falls within Category 3. Energy Northwest received its Renewed Facility Operating Licensing on May 22, 2012. Columbia’s commitment to a Boron Carbide Monitoring Program with an enhancement to perform *in-situ* testing is documented under license condition 2.C.(35) as number 61.

- C. This renewed license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the *additional conditions specified or incorporated below*: . . .

(35) The licensee's FSAR supplement submitted pursuant to 10 CFR 54.21 (d), as revised during the license renewal application review process, and as supplemented by *Commitment Nos.* 1, 5, 13, 14, 17, 18, 23, 24, 26, 27, 28, 32, 36, 38, 40, 41, 42, 43, 48, 49, 50, 53, 55, 58, 59, 60, 61, 63, 64, 65, 66, 67, 68, 69, and 70 of Appendix A of NUREG-2123, describes certain future programs and activities to be completed before the period of extended operation. Energy Northwest shall complete these activities no later than June 20, 2023, and shall notify the NRC in writing when implementation of these activities is complete.

Reference 2, ML12089A090.

Commitment 61 is described in Appendix A of NUREG-2123.

During the review of the Columbia Generating Station (Columbia) license renewal application (LRA) by the staff of the U.S. Nuclear Regulatory Commission (NRC) (the staff), Energy Northwest (EN) (applicant) made commitments related to Aging Management Programs (AMPs) to manage aging effects of structures and components (SCs) prior to the period of extended operation. The following table lists these commitments, along with the implementation schedules and the sources for each commitment. . . .

61) Boron Carbide Monitoring Program	The Boron Carbide Monitoring Program is an existing program that will be continued for the period of extended operation. Initial in situ testing of the spent fuel rack neutron absorbing material will be performed prior to the period of extended operation to determine the current state of the racks. Additional in situ testing will be based on the results of this initial testing, but at an interval not to exceed ten years.
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As stated in GL 2016-01, "Previously-docketed information may be referenced (including license renewal applications and license amendment requests) if the addressee affirms that the information remains applicable and provides any updated or missing information. In all cases, the NRC is asking licensees to provide information available, based on a reasonable search of plant records, docketed information, and licensing basis." Reference 2 docketed correspondence contains License condition 2.C.(35), commitment number 61.

There has been no change made to Columbia's neutron-absorbing material monitoring program as described in license condition 2.C.(35), commitment number 61.

The correspondence referenced below represents previously docketed information from Energy Northwest and the NRC that demonstrates that credited neutron-absorbing materials in Columbia's SFP is in compliance with the licensing and design basis, and with applicable regulatory requirements; and that there are measures in place to maintain this compliance.

References:

1. Letters from Energy Northwest dated August 19, 2010 (ADAMS Accession Number ML102440342), dated January 14, 2011 (ADAMS Accession Number ML110180457), and dated April 5, 2011 (ADAMS Accession Number ML110970354)
2. Letters from NRC dated May 22, 2012 (ADAMS Accession Number MLs12089A043 and 12089A090)