



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 29, 2021

Mr. Bradley J. Sawatzke
Chief Executive Officer
Energy Northwest
MD 1023
76 North Power Plant Loop
P.O. Box 968
Richland, WA 99352

SUBJECT: COLUMBIA GENERATING STATION – CLOSEOUT OF BULLETIN 2012-01,
“DESIGN VULNERABILITY IN ELECTRIC POWER SYSTEM”
(EPID L-2017-CRS-0063)

Dear Mr. Sawatzke,

The purpose of this letter is to inform you that the U.S. Nuclear Regulatory Commission (NRC) staff has verified that Energy Northwest (the licensee) has provided the necessary information requested in NRC’s Bulletin (BL) 2012-01, “Design Vulnerability in Electric Power System,” dated July 27, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12074A115) for Columbia Generating Station (Columbia). The NRC staff has completed its review of BL 2012-01 for Columbia and considers the open phase issue closed at Columbia.

The NRC issued BL 2012-01 to all holders of operating licenses and combined licenses for nuclear power reactors, except those who have permanently ceased operation and have certified that fuel has been removed from the reactor vessel. BL 2012-01 requested information about each facility’s electric power system designs that would allow the NRC staff to verify the system’s capability to address open phase conditions. Specifically, the NRC requested licensees to provide the following information:

- A description of how the protection scheme for engineered safety features buses (Class 1E for current operating plants or non-Class 1E for passive plants) is designed to detect and automatically respond to a single-phase open circuit condition or high impedance ground fault condition on offsite power circuits or another power source; and
- A description of the operating configuration of engineered safety features buses (Class 1E for current operating plants or non-Class 1E for passive plants) at power (i.e., normal operating condition).

By letter dated October 25, 2012 (ADAMS Accession No. ML12313A005), the licensee provided its response to BL 2012-01 for Columbia. By letter dated February 3, 2014 (ADAMS Accession No. ML14049A282), the licensee responded to the NRC’s subsequent request for additional information dated December 20, 2013 (ADAMS Accession No. ML13351A314).

By letters dated October 9, 2013, and March 16, 2015 (ADAMS Accession Nos. ML13333A147 and ML15075A454, respectively), the Nuclear Energy Institute (NEI) submitted a voluntary

industry initiative to address open phase conditions at nuclear power plants. The NEI letter dated March 16, 2015, stated, in part, that “The initiative is a formal commitment by the companies that operate nuclear power plants to follow a specific policy or plan of action. The initiative calls for a proactive plan and schedule for addressing the potential design vulnerabilities to the open phase condition.”

To evaluate the adequacy of the open phase isolation systems designs, the NRC staff inspected four nuclear power plants with four distinct open phase isolation system designs using the NRC’s Temporary Instruction (TI) 2515/194, “Inspection of the Licensees’ Implementation of Industry Initiative Associated with the Open Phase Condition Design Vulnerabilities in Electric Power Systems (NRC Bulletin 2012-01),” dated October 31, 2017 (ADAMS Accession No. ML17137A416). A summary of the NRC staff’s preliminary observations and issues needing additional clarity were discussed with industry representatives in two public meetings conducted on September 19, 2018, and October 17, 2018. The meeting summaries can be found in ADAMS at Accession Nos. ML18268A342 and ML18309A226, respectively.

In December 2019, the NRC staff performed an inspection using TI 2515/194 at Columbia to verify the licensee’s implementation of Revision 1 of the voluntary industry initiative at this facility. To address the open phase condition design vulnerability issue at Columbia, the licensee implemented open phase isolation system plant modifications, which provide detection, alarm, and automatic protective features. The NRC’s inspection report, as identified below, documents the results of this TI 2515/194 inspection. No findings or violations of more than minor significance were identified.

- NRC Inspection Report 05000397/2019013, “Columbia Generating Station – Temporary Instruction 2515/194 – Inspection Report 05000397/2019013,” dated December 20, 2019 (ADAMS Accession No. ML19354C268).

The NRC staff has reviewed the information submitted by the licensee and the results of the TI 2515/194 inspection for Columbia. Based on this review, the NRC staff concludes that the licensee provided the necessary information requested in BL 2012-01. Therefore, the NRC staff has closed BL 2012-01 for Columbia.

If you have any questions, please contact me at 301-415-8371 or by e-mail to Mahesh.Chawla@nrc.gov.

Sincerely,

/RA/

Mahesh L. Chawla, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-397

cc: Listserv

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“DESIGN VULNERABILITY IN ELECTRIC POWER SYSTEM
(EPID L-2017-CRS-0063) DATED JUNE 29, 2021

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***by e-mail**

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