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April 13, 2017

GO2-17-086

10 CFR 21

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

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397  
10 CFR 21 NOTIFICATION**

Dear Sir or Madam:

Transmitted herewith is 10 CFR Part 21 Notification for Columbia Generating Station. This report is submitted pursuant to 10 CFR 21.21(d)(3)(ii). This information was initially reported to the NRC Operations Center on March 16, 2017 (Event Notification #52615).

The attachment to this letter provides the information required by 10 CFR 21.21(d)(4).

There are no commitments being made to the NRC by this letter. If you have any questions or require additional information, please contact Ms. D.M. Wolfgramm, Regulatory Compliance Supervisor, at (509) 377-4792.

Executed on this 12<sup>th</sup> day of April, 2017.

Respectfully,

A. L. Javorik  
Vice President, Engineering

Attachment: 10 CFR Part 21 Notification

cc: NRC Region IV Administrator  
NRC NRR Project Manager  
NRC Senior Resident Inspector/988C  
CD Sonoda – BPA/1399  
WA Horin – Winston & Strawn

**10 CFR Part 21 Notification**  
**AZZ/NLI Supplied Buckets DLO-42-7AA6D and DLO-42-7AA4B**

- (i) Name and address of the individual or individuals informing the Commission.

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- (ii) Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

Facility:  
Columbia Generating Station  
PO Box 968  
Richland, WA 99352

Manufacturer:  
AZZ Nuclear / NLI  
7410 Pebble Drive  
Fort Worth, TX 76118

Component: Size 1 Freedom Series Starters  
Part Type: Motor Control Center Cubicle (Bucket)  
Defective P/N: 057018COIL-1/2, 057018COIL-3, 057018COIL-5

- (iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

AZZ Nuclear / NLI  
7410 Pebble Drive  
Fort Worth, TX 76118

- (iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

Columbia Generating Station's (Columbia) procurement specification required that the Alternating Current (AC) contactor coils be capable of withstanding continuous operation with 528 volts applied to the primary of the Control Power Transformer (CPT). The specification reads: "AC contactor coils shall be capable of withstanding continuous operation with 528 volts applied to the primary of the control power transformer." NLI supplied a starter design that included a secondary coil with a maximum voltage rating of 132 VAC. The CPT, with a primary coil voltage of 528 VAC, supplied voltage in excess of 132 VAC to the secondary coil. Therefore, the supplied coil's limitation of a maximum voltage rating of 132 VAC constitutes a **Deviation** from the specification.

The excess voltage supplied to the secondary coil results in coil overheating, with the contactors failing to close resulting in an open circuit. Therefore, the contactor is not able to supply power to the load. This is a safety function of the contactor when used to supply power to a safety related load. In accordance with 10 CFR Part 21 reporting of defects, a loss of any safety function of a basic component is a major reduction in the degree of protection and, therefore, a **Substantial Safety Hazard**. This deviation, were it to remain uncorrected, would constitute a common mode failure to all continuously energized safety related loads that are supplied power from NLI AC buckets during normal or accident conditions, and that contain this type of contactors/starters.

Therefore, the conclusion is that the deviation is a **Defect** reportable in accordance with 10 CFR Part 21.

- (v) The date on which the information of such defect or failure to comply was obtained.

The potential deviation was entered into Columbia's Corrective Action Program (CAP) on January 30, 2017.

The assessment for Part 21 was completed on March 14, 2017, and determined that the reported deviation constituted a defect in accordance with regulatory definitions.

An officer of the company was notified of the defect and Part 21 reporting requirement on March 14, 2017.

Notification to the NRC of the defect was completed on March 16, 2017 by Event Notification #52615, by the manager of Regulatory Affairs as delegated by the Vice President of Engineering.

- (vi) In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part.

A review of the part numbers found 148 coils installed, 38 coils in stores activities, and 8 coils on order. Eleven of the installed coils were identified as being installed in continuously energized safety related applications.

- (vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

Of the eleven motor starter coils identified for replacement, ten have already been replaced with the same make and model of coil. The remaining starter will be replaced by Columbia Generating Station during the next refueling outage (May-June 2017). The continuously operated coils are on a one year replacement plan until a permanent solution can be developed.

- (viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

Recommend that licensees fully understand procurement specifications provided to the manufacturer, and verify that the manufacturer met the specification through testing.

- (ix) In the case of an early site permit, the entities to whom an early site permit was transferred.

Not Applicable