



**Nicole Flippin**  
Vice President  
Catawba Nuclear Station

**Duke Energy**  
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RA-25-0079

10 CFR 21.21

March 20, 2025

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

Subject: Duke Energy Carolinas, LLC  
Catawba Nuclear Station, Unit Nos. 1 and 2  
Docket Nos. 50-413 and 50-414  
Part 21 Notification – Love Controller

In accordance with 10 CFR 21.21 (d)(3)(ii) and (d)(4), enclosed is the required 30 day written notification of the identification of a defect for the Duke Energy dedicated Love Controllers. This information was initially reported to the NRC Operations Center on February 19, 2025 (i.e., Event Notification Number 57560).

There are no regulatory commitments contained in this letter or its attachment.

Please direct any questions or concerns to Sherry Andrews, Lead Regulatory Affairs Specialist, at 803-701-3424.

Sincerely,

A handwritten signature in black ink that reads 'Nicole Flippin' in a cursive script.

Nicole Flippin  
Vice President, Catawba Nuclear Station

Enclosure

U.S. Nuclear Regulatory Commission  
March 20, 2025

xc (with enclosure):

Mark Miller, Region II Administrator, Acting  
U.S. Nuclear Regulatory Commission

Jack Minzer-Bryant, Project Manager  
U.S. Nuclear Regulatory Commission

David Rivard, Senior Resident Inspector, Catawba Nuclear Station  
U.S. Nuclear Regulatory Commission

**Catawba Nuclear Station Part 21 Notification Per 10 CFR 21.21(d)(3) and (d)(4)**

- (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.

The basic component containing the defect which is the subject of this notification is the Limpet Love controller, supplier part number 54-834-838-8187-8160-8134-8174, purchased and dedicated by Duke Energy, Catawba Nuclear Station, for use in nuclear safety related applications.

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

Limpet manufactured the Love controllers. The subject parts were procured as commercial grade and dedicated by Duke Energy, Inc., solely for use at Catawba Nuclear Station.

- (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.

Manufacturer circuit board workmanship issues associated with the Love controller resulted in a failed controller installed in Catawba's 2A1 emergency diesel generator room ventilation train and resulted in Catawba submitting licensee event report (LER) 2024-001-00. The loss of one emergency diesel room ventilation fan, under certain conditions, could cause a loss of safety function at elevated outside air temperatures and could result in a substantial safety hazard.

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

Duke Energy performed the evaluations required by 10 CFR 21 and Duke Energy procedures and determined this issue was 10 CFR 21 reportable on February 18, 2025.

- (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.

Duke Energy procured the commercial grade controllers, dedicated, and installed some of the subject controllers in safety related applications at Catawba Nuclear Station. Eighteen of the subject basic components are installed in various safety related applications at Catawba Nuclear Station. Five of the subject basic components are available for use at Catawba Nuclear Station. The installed, and available, controllers have all been inspected and determined acceptable. Duke Energy did not sell, and

U.S. Nuclear Regulatory Commission  
March 20, 2025

currently does not plan to sell, or transfer, any of the affected controllers to any other utility.

- (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.

Catawba Engineering completed an evaluation which identified workmanship issues internal to the Love controller. The installed and 'available for use' dedicated Love controllers at Catawba Nuclear Station were inspected and determined to be acceptable for use. Procurement Engineering has enhanced the receipt inspection to ensure a thorough, internal visual inspection is performed for the Love controllers during the digital exam process, to be completed using appropriate tools to specifically look for any parts quality and workmanship issues. This is to include, but not limited to, PCB, soldered connections, sub-assemblies, piece parts, and conductors. Corrective actions have all been completed.

- (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.

None.

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

This event does not involve an early site permit.