T. PRESTON GILLESPIE, JR.
Vice President
Oconee Nuclear Station

Duke Energy
ON01VP / 7800 Rochester Hwy.
Seneca, SC 29672

864-873-4478
864-873-4208 fax
T.Gillespie@duke-energy.com

10 CFR 2.201

February 27, 2012

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-001

Subject: Duke Energy Carolinas, LLC. (Duke Energy)
Oconee Nuclear Station, Units 1, 2, and 3
Docket Nos. 50-269, 50-270, 50-287
Reply to a Notice of Violation

Reference: Letter from Richard P. Croteau (NRC) to Preston Gillespie (Duke Energy), "Oconee Nuclear Station – NRC Problem Identification and Resolution Inspection Report 05000269/2011008, 05000270/2011008, and 05000287/2011008, And Notice of Violation," dated January 26, 2012

In the referenced letter, the U.S. Nuclear Regulatory Commission (NRC) transmitted Problem Identification and Resolution Inspection Report (IR) 05000269/2011008, 05000270/2011008, and 05000287/2011008 (ADAMS Accession No. ML120260740) to Duke Energy which pertained to the Oconee Nuclear Station (ONS). The letter also included a Notice of Violation (NOV) identifying a violation of NRC requirements set forth in 10 CFR 50, Part B and 10 CFR 50.49(f). The violation, identified by the NRC as "VIO 2011008-001," involves ONS's failure to promptly identify and correct a condition adverse to quality involving the environmental qualification (EQ) of Limitorque actuators. The violation is associated with a Green Significance Determination Process finding.

Pursuant to the provisions of 10 CFR 2.201, Duke Energy has prepared a written reply to the subject violation as Attachment 1 to this letter. Duke Energy does not contest the violation. To date, corrective actions have been taken on a select number of Limitorque actuators which Duke Energy believes corrected the adverse condition for those actuators. Details related to the remaining corrective actions necessary to resolve the violation are described in Attachment 1.

One new regulatory commitment from this letter is identified in Attachment 2.

Any questions regarding the content of this report should be directed to Mr. Kent Alter, ONS Regulatory Compliance Manager, at 864-873-3255.

Sincerely,

TPGillespie

T. Preston Gillespie, Jr.

IE01
NRR

Attachments:

1. Reply to a Notice of Violation - NRC Inspection Report No. 05000269/2011008, 05000270/2011008, and 05000287/2011008
2. List of Regulatory Commitments

cc: Mr. Victor McCree
Administrator, Region II
U.S. Nuclear Regulatory Commission
Marquis One Tower
245 Peachtree Center Ave., NE, Suite 1200
Atlanta, GA 30303-1257

Mr. John Stang
Project Manager
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, DC 20555

Mr. Andrew Sabisch
NRC Senior Resident Inspector
Oconee Nuclear Station

Attachment 1

Oconee Nuclear Station – Units 1, 2, and 3

Reply to a Notice of Violation
NRC Inspection Report No. 05000269/2011008, 05000270/2011008, and 05000287/2011008

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Restatement of Violation VIO 2011008-001

During an inspection completed on December 16, 2011, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is set forth below:

A. 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, requires in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, and non-conformances are promptly identified and corrected.

10 CFR 50.49(f) requires that each item of electric equipment important to safety shall be qualified by one of the following methods:

(1) Testing an identical item of equipment under identical conditions or under similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable;
(2) Testing a similar item of equipment with a supporting analysis to show that the equipment to be qualified is acceptable;
(3) Experience with identical or similar equipment under similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable; or
(4) Analysis in combination with partial type test data that supports the analytical assumptions and conclusions.

Contrary to the above, from October to November 2010 (Unit 3 refueling outage), from April to June 2011 (Unit 1 refueling outage), and in November 2011 (Unit 2 refueling outage), the licensee failed to establish measures to assure that a condition adverse to quality, identified by the NRC in NCV 2010004-03, was promptly identified and corrected. Specifically, the licensee missed reasonable opportunities during each Unit's refueling outage to confirm the population of Limitorque actuators that were potentially installed in an unqualified configuration in order to properly assess the extent of the non-conforming condition discussed in NCV 2010004-03 and take appropriate corrective actions. Consequently, an unknown population of Limitorque actuators in Units 1, 2, and 3 remained in a configuration that was not qualified in accordance with one of the methods described in 10 CFR 50.49(f).

This violation is associated with a Green Significance Determination Process finding.

Admission or Denial

Duke Energy does not contest the violation. The condition adverse to quality identified in above VIO 2011008-001 was entered into Duke Energy's Corrective Action Program.

Reasons for the Violation

The reason for the Violation is that Duke Energy relied upon a calculation that was lacking analysis to support which Limitorque actuators at the Oconee Nuclear Station (ONS) required "T-drain" installation on the actuator's limit switch compartment (LSC) housing in order to be considered environmentally qualified. A description of the events that lead to Duke Energy's failure to promptly resolve an identified condition adverse to quality is as follows:

The issue involving environmental qualification (EQ) of select Limitorque actuators was initially identified during an NRC EQ inspection at the ONS in August 2010. Specifically, some Limitorque actuators were installed at ONS with the LSC mounted in a vertically down orientation and without the installation of T-drains on the LSC housing. The applicable Limitorque EQ Test Report (Report B0058) indicated that this type of actuator was tested by Limitorque with the LSC oriented in the vertical up position and with a T-drain installed on the actuator motor to verify the unsealed design and drain any potential condensation resulting from a design basis event.

The LSC vertically down orientation could potentially allow for accumulation of condensation in the LSC and could cause limit switch and torque switch failure, electrical shorts, etc. As a result of this adverse condition, the NRC cited ONS with non-cited violation (NCV) 2010004-03, "EQ Components Not Installed in the As-Qualified Configuration," in Integrated Inspection Report 2010004 (ADAMS Accession No. ML103020265).

Duke Energy believed that the proper action to resolve this adverse condition was the development of a calculation that supported analysis of the Limitorque EQ report that was utilized to determine LSC orientation requirements. On September 29, 2011, a calculation entitled "Environmental Qualification (EQ) Evaluation of Limitorque MOV Actuator Installed Orientations" was approved and issued. The calculation reviewed the various valves that were installed with Limitorque actuators and the environments where the valves were installed. The calculation determined that drainage was only potentially needed on the valves that were in containment and had long term actions to respond following a loss of coolant accident (LOCA). This calculation provided what Duke Energy believed was the analysis and results needed in order to resolve the Limitorque actuator EQ issue. However, as noted in the NRC inspection report, the calculation results only served to address the valves which had an operability concern and did not ensure compliance with EQ requirements for all valves. Based on the NRC inspection report, the analysis performed by the calculation was not considered adequate for full EQ compliance for Limitorque actuators at ONS that are installed in a configuration different from the orientation originally tested by the vendor. Duke Energy now believes in order for Limitorque actuators at ONS that are installed in a configuration different from the orientation originally tested by the vendor to be considered in full EQ compliance either:

(1) have supporting documentation to demonstrate that Limitorque actuators installed in a configuration different from the orientation originally tested by the vendor (i.e. LSC in the vertical down position and without drainage) are in compliance with the EQ requirements in 10 CFR 50.49, or
(2) install LSC drainage in the lowest existing LSC housing plug port or drill and tap the LSC housing at its lowest achievable point for all environmentally qualified Limitorque actuators where the LSC is not oriented in the EQ-tested position (i.e., vertically up).

As a result of the calculation, only environmentally qualified Limitorque actuators in the Reactor Building required walkdowns, as all other environmentally qualified Limitorque actuators had been evaluated as not requiring LSC T-drains. ONS planned on performing Limitorque actuator walkdowns and LSC T-drain installations during upcoming refueling outages for each unit. The analysis-required LSC T-drain installations for Unit 2 Limitorque actuators were performed in the Unit 2 Fall 2011 refueling outage. Analysis-required Limitorque actuator LSC T-drain installations were planned for Unit 3 in the Unit 3 Spring 2012 refueling outage and for Unit 1 in the Unit 1 Fall 2012 refueling outage. Since no actions were taken to ensure compliance until after the calculation was approved, Duke Energy did not address the non-compliance with the EQ requirements in a timely manner. Duke Energy failed to take any actions during the previous Unit 3 outage (Fall 2010) and Unit 1 outage (Spring 2011). The failure to take timely actions was due to improper prioritization of the drain installations until after the calculation was performed. Duke Energy should have installed the drains to ensure compliance while awaiting the results of the calculation.

In December 2011, ONS management directed that the installation of the analysis-required LSC T-drains in Units 1 and 3 Limitorque actuators be performed as soon as reasonably possible with the units at power. Thus, on December 15, 2011, LSC T-drains were installed on the remaining Unit 1 and 3 analysis-required Limitorque actuators, with the exception of one valve (3LP-104) in Unit 3. This valve is difficult to access due to its location and will require temporary scaffolding installation. For this reason, and since the function of 3LP104 without the LSC T-drain was not an operability concern, ONS management directed that the LSC T-drain installation for this valve be performed during the Unit 3 refueling outage in Spring 2012.

In conclusion, the above described course of action failed to completely resolve the adverse condition specified in NCV 2010004-03 in that some environmentally qualified Limitorque actuator LSCs were still installed in an un-tested orientation (i.e., LSC not mounted vertically up) and Duke Energy's supporting calculation failed to provide adequate analysis that this untested orientation complied with the EQ requirements of 10 CFR 50.49(f). Finally, the duration of time that elapsed from initial issue identification (August 2010) until the time that Duke Energy commenced walkdowns and LSC T-drain installations of environmentally qualified Limitorque actuators (October 2011) was excessive. Duke Energy failed to commence walkdowns and LSC T-drain installations of environmentally qualified Limitorque actuators in the Unit 3 Fall 2010 refueling outage and the Unit 1 Spring 2011 refueling outage to resolve the Limitorque actuator EQ issue.

Corrective Steps Taken and Results Achieved

1. On December 15, 2011, ONS completed installation of LSC T-drains on the analysis-required Limitorque actuators in Units 1 and 3, with the exception of Unit 3 valve 3LP-104. Installation of a LSC T-drain for this valve requires temporary scaffolding installation. Since the valve was considered operable, Duke Energy chose not to install a LSC T-drain on this valve until the Unit 3 Spring 2012 refueling outage due to the valve's location and elevation.

2. On January 11, 2012, ONS reviewed the adverse condition of Unit 3 operating with a potentially non EQ-qualified Limitorque actuator for impact on Emergency Operating Procedures (EOPs), and determined that no EOP changes were necessary.

Corrective Steps That Will be Taken

1. By March 8, 2012, ONS Engineering management will issue a communication to Engineering personnel reminding them of the need to provide timely response to NRC violations. The communication will indicate that compliance with requirements must be restored in a timely manner at the first available opportunity. In addition, the prioritization of the activities will be re-inforced by the communication.

2. By the end of the Unit 2 Fall 2013 refueling outage, ONS will either (A) have supporting documentation to demonstrate that Limitorque actuators installed in a configuration different from the orientation originally tested by the vendor (i.e. LSC in the vertical down position and without drainage) are in compliance with the EQ requirements in 10 CFR 50.49, or (B) install LSC drainage in the lowest existing LSC housing plug port or drill and tap the LSC housing at its lowest achievable point for all environmentally qualified Limitorque actuators where the LSC is not oriented in the EQ-tested position (i.e., vertically up).

3. The Engineering Corrective Action Review Board will establish process changes to address the analysis quality and timeliness of the original NCV response. This review will be completed by March 22, 2012.

4. Processes that monitor the evaluations and implementation of corrective actions associated with violations will be strengthened. These process enhancements will be made by June 30, 2012.

Date When Full Compliance Will Be Achieved

Duke Energy commits to be in full compliance with 10 CFR 50.49 on this issue by the end of the Unit 2 Fall 2013 refueling outage, November 30, 2013.

ATTACHMENT 2

List of Regulatory Commitments

The following commitment table identifies those actions committed to by Duke Energy Carolinas, LLC (Duke Energy) in this submittal. Other actions discussed in the submittal represent intended or planned actions by Duke Energy. They are described to the U.S. Nuclear Regulatory Commission (NRC) for the NRC's information and are not regulatory commitments.

No.	Commitment Description	Due Date
1	Duke Energy will restore full compliance with 10 CFR 50.49 on the Limitorque actuator EQ issue.	11/30/13