



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

June 20, 2018

Mr. Tom Simril
Site Vice President
Duke Energy Corporation
Catawba Nuclear Station
4800 Concord Road
York, SC 29745-9635

SUBJECT: NOTICE OF ENFORCEMENT DISCRETION (NOED) FOR CATAWBA NUCLEAR STATION, UNIT 2, NOED 18-2-001

Dear Mr. Simril:

By letter dated June 18, 2018 (ADAMS Accession No. ML18170A007), Duke Energy requested that the U.S. Nuclear Regulatory Commission (NRC) exercise discretion for compliance with the actions required in Catawba Nuclear Station Unit 2, Technical Specifications (TS) Limiting Condition for Operation (LCO) 3.8.1 – “AC Sources – Operating” (primary TS), TS 3.7.8, “Nuclear Service Water System (NSWS),” TS 3.7.5, “Auxiliary Feedwater (AFW) System,” and TS 3.6.6, “Containment Spray System.”

Your letter documented information previously discussed with the NRC in a telephone conference on June 14, 2018, at 1:00 a.m. Eastern Daylight Time (EDT). The principal NRC staff members who participated in the telephone conference are listed in the Enclosure. The staff determined that the information in your letter requesting the NOED was consistent with your oral request. The NRC first became aware of the potential for this NOED request on June 13, 2018, at approximately 7:00 p.m. EDT.

Your staff requested that a NOED be granted pursuant to the NRC’s policy regarding exercise of discretion for an operating power reactor, set out in Section 3.8 of the Enforcement Policy, and the NOED be effective for an additional 48 hours (until 4:08 a.m. EDT on Saturday, June 16, 2018). This letter documents our telephone conversation on June 14, 2018, when we orally granted this NOED request. We understand that the condition causing the need for this NOED was corrected and Catawba Unit 2 exited from TS Required Condition Action 3.8.1 Condition G, TS 3.7.8, and from this NOED at 9:06 p.m. EDT on June 14, 2018. The LCOs for TS 3.7.5 and 3.6.6 were exited at 9:41 p.m. on June 14, 2018.

Summary

On June 11, 2018, at 4:08 a.m. the Unit 2 A emergency diesel generator was declared inoperable. This inoperability was planned as part of scheduled maintenance activity. During the post maintenance test, the 2A diesel generator and associated breaker 2ETA-18 tripped on an 86D lockout when trying to load in parallel and therefore failed the post maintenance test.

During troubleshooting, two disconnected cables were identified in the voltage regulator circuitry. These two cables connected the current transformer to the linear reactor. The likely cause of the disconnected cable was a failure to properly reassemble the connection after maintenance.

During extent of damage visual inspections of the voltage regulator cabinet, evidence of arcing between a heat sink mounting screw and the heat sink for shunt silicon controlled rectifier (SCR) 1 was discovered. As a result, the SCRs and diodes were replaced. The current transformer was also replaced, and the associated linear reactor was tested and found to be operating satisfactorily with no damage. During the functional run, it was determined that the voltage regulator module was not operating correctly. This indicated that the extent of damage from the two cables that were left disconnected also included damage to the voltage regulator module.

Enforcement discretion was requested to avoid an unnecessary shutdown of Catawba Unit 2 without a corresponding health and safety benefit. The proposed enforcement discretion request meets NOED Inspection Manual Chapter 0410 Section 03.03 Criterion b, by avoiding an unnecessary down-power or the shutdown of a reactor without a corresponding health and safety benefit. Your staff indicated that the calculated increase in incremental conditional core damage probability (ICCDP), using the zero maintenance probability model, for the requested 48 hours enforcement discretion period was $3E-7$. You indicated that the increase in incremental conditional large early release probability (ICLERP) was $4E-8$. These values are less than the $5E-7$ and $5E-8$ guidance thresholds, respectively, in Inspection Manual Chapter 0410, "Notices of Enforcement Discretion."

Some of the compensatory measures that the licensee took to reduce the risk were:

- Deferred non-essential surveillances and other maintenance activities on equipment required by TS and on risk significant equipment.
- Staffed the standby shutdown facility (SSF).
- Assigned dedicated operators to transfer plant control from the control room to the SSF if necessary, and transfer power for the hydrogen igniters from normal power to SSF power if necessary.
- The following equipment was protected: 2B emergency diesel generator and equipment supported by it, SSF, Unit 2 turbine-driven AFW pump, switchyard and Unit 1 and 2 main transformers yards
- Licensee commenced actions to stage FLEX equipment for auxiliary feedwater recovery and battery life extension.

Your staff further stated that the noncompliance would not create undue risk to public health and safety, in that (1) it did not involve a significant increase in the probability or consequences of a previously evaluated accident scenario; (2) it did not create the possibility of a new or different kind of accident from those previously evaluated; and (3) it did not involve a significant reduction in a margin of safety. The Catawba Plant On-Site Review Committee (ORC) approved submission of the NOED request on June 13, 2018, prior to the verbal request for an NOED.

In consultation with the NRC resident inspection staff at the Catawba Nuclear Station, the NRC verified your staff's oral statements, including the likely cause and compensatory measures. NRC staff also independently evaluated your staff's estimates for ICCDP and ICLERP.

On the basis of the NRC staff's evaluation of Duke's request, we concluded that granting this NOED is consistent with the NRC's Enforcement Policy and staff guidance and would have no adverse impact on public health and safety or the environment. Therefore, as communicated orally to your staff at 2:34 a.m. EDT on June 14, 2018, we exercised enforcement discretion to not enforce compliance with TS LCO 3.8.1 Condition G requirements that Catawba Nuclear Station, Unit 2, be in Mode 3 by 10:08 a.m. EDT on June 14, 2018. Unit 2 Mode 3 entry was extended by 48 hours, to allow completion of repair on the 2A emergency diesel generator. The additional period provided by the NOED expired at 4:08 a.m. EDT on June 16, 2018.

Your staff subsequently informed the NRC that Catawba Nuclear Station completed repairs to the 2A emergency diesel generator such that the condition causing the need for this NOED was corrected at 9:06 p.m. EDT on June 14, 2018.

In addition, as discussed during the telephone conference on June 14, 2018, the NRC staff agreed with your determination that a follow-up TS amendment was not necessary.

As stated in the NRC Enforcement Policy, enforcement action may be taken to the extent that violations were involved for the root cause that led to the noncompliance for which this NOED was necessary.

Sincerely,

/RA/

Joel T. Munday, Director
Division of Reactor Projects

License No.: NPF-52

Enclosure:
List of Participants

cc: Distribution via ListServ

SUBJECT: NOTICE OF ENFORCEMENT DISCRETION (NOED) FOR CATAWBA NUCLEAR STATION, UNIT 2, NOED 18-2-001 June 20, 2018

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