



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 23T85
ATLANTA, GEORGIA 30303-8931**

August 2, 2002

EA-02-048

Duke Energy Corporation
ATTN: Mr. W. R. McCollum
Site Vice President
Oconee Nuclear Station
7800 Rochester Highway
Seneca, SC 29672

**SUBJECT: FINAL SIGNIFICANCE DETERMINATION FOR A WHITE FINDING AND
NOTICE OF VIOLATION (NRC INSPECTION REPORT 50-269/02-12,
50-270/02-12, 50-287/02-12, OCONEE NUCLEAR STATION)**

Dear Mr. McCollum:

The purpose of this letter is to provide you with the Nuclear Regulatory Commission's (NRC) final significance determination for a finding involving the lack of adequate procedural controls for ensuring containment closure upon a possible loss of reactor decay heat removal while Oconee Unit 1 was in reduced reactor coolant system inventory conditions during the Fall 2000 refueling outage. The finding was documented in NRC Inspection Report No. 50-269/00-07, 50-270/00-07, and 50-287/00-07, dated January 29, 2001, and was assessed under the significance determination process as a preliminary White issue, i.e., an issue of low to moderate safety significance, which may require additional NRC inspection. The NRC's letter of April 8, 2002, informed Duke Energy Corporation (DEC) of the NRC's preliminary conclusion, provided DEC an opportunity to request a regulatory conference on this matter, and forwarded the details of the NRC's preliminary estimate of the change in Large Early Release Frequency (LERF) for this finding. The issue involved LERF considerations associated with the potential for a fission product release to the environment approximately five hours following the postulated loss of reactor decay heat removal capability.

In lieu of a regulatory conference, DEC submitted a written response dated July 11, 2002, which confirmed the completion of procedural revisions and provided DEC's additional perspective on the issue. DEC acknowledged the finding and, in summary, disagreed with an assumption used in the NRC's preliminary assessment regarding whether operators would have relied on a non-qualified temporary hatch cover to satisfy containment closure requirements and forego closure of the outer emergency hatch door. DEC concluded that most operators, given a loss of decay heat removal situation, would close the equipment hatch door. This conclusion was based on discussions between DEC representatives and plant operators following the NRC's identification of the issue. In addition, given the expected slow development of a loss of decay heat removal scenario and subsequent containment pressurization event, DEC concluded that the Technical Support Center (TSC) would have been activated and that TSC personnel would have been monitoring the status of each fission product barrier. DEC stated that it was confident that the TSC would have directed actions to ensure containment closure using the emergency hatch door prior to any significant radiological

release, and that the NRC's Significance Determination Process (SDP) process apparently had no provision to consider the TSC response in determining the increase in LERF for this finding.

Based on the information developed during the inspection and the information DEC provided by letter dated July 11, 2002, the staff concluded that the final risk significance of the inspection finding is appropriately characterized as White, affecting the barrier integrity cornerstone. The NRC also questioned plant operators soon after identification of the issue to determine what actions would be taken for a loss of decay heat removal scenario. The NRC concluded that the operators would not have questioned the need to re-verify containment closure. As part of this consideration, the NRC noted that no cues would be available during the scenario to alert the operators of the need to question the integrity of the foam seals/temporary cover or re-verify containment closure, and that specific procedural steps did not exist to direct closure of the outer emergency hatch door. This consideration was documented in the NRC's Phase III analysis. DEC's response of July 11, 2002, provided no new information to warrant changing this assumption.

Although consideration of the TSC was not explicitly documented in the NRC's Phase III analysis, recovery actions and human reliability factors from the TSC were, in fact, considered qualitatively in the staff's risk-informed preliminary assessment. However, the staff found an insufficient basis to conclude that either control room operators or TSC personnel would recognize the need to question the integrity of the foam seals/temporary cover or take other actions to ensure containment integrity. We also note that, in the absence of adequate instructions for operators to close one of the emergency hatch doors, other factors would be required to significantly improve the probability that operators would successfully accomplish containment closure during a loss of decay heat removal scenario, and thus lower the LERF to less than 10^{-7} /year. DEC's response of July 11, 2002, provided no new information to change the staff's conclusion regarding the likelihood of operator or TSC personnel action to ensure containment integrity.

You have ten business days from the date of this letter to appeal the staff's determination of significance for the identified White finding. Such appeals will be considered to have merit only if they meet the criteria given in NRC Inspection Manual Chapter 0609, Supplement 2.

The NRC also determined that a violation occurred involving the requirements of Technical Specification 5.4.1 and Abnormal Procedure AP/1,2,3/A/1700/26, Loss of Decay Heat Removal, Revision 10. The violation is documented in the enclosed Notice of Violation (Notice), and the circumstances surrounding it are described in detail in the subject inspection report. The NRC found that the immediate manual actions of AP/1,2,3/A/1700/26 to establish containment closure lacked sufficient instructions to ensure that operators would direct the closure of the outer emergency hatch door upon a loss of decay heat removal. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the Notice is considered escalated enforcement action because it is associated with a White finding. The NRC also notes that, as documented in our letter of April 8, 2002, and confirmed in DEC's letter of July 11, 2002, the procedure has been revised to provide clear guidance to operators to ensure closure of the outer emergency hatch door. As such, this finding does not represent a current safety issue.

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when

full compliance was achieved is adequately addressed on the docket in NRC Inspection Report No. 50-269/00-07, 50-270/00-07, and 50-287/00-07, and in DEC's letter of July 11, 2002. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

Because plant performance for this issue has been determined to be in the increased regulatory response band, we will use the NRC Action Matrix to determine the most appropriate NRC response for this finding. We will notify you, by separate correspondence, of that determination.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure, and your response (should you choose to provide one), will be available electronically for public inspection in the NRC Public Document Room (PDR) or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). To the extent possible, any response should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR and PARS without redaction.

For administrative purposes, this letter is issued as a separate NRC Inspection Report, No. 50-269/02-12, 50-270/02-12, 50-287/02-12, and the above violation is identified as VIO 50-269,270,287/02-12-01: Inadequate Procedure Involving Containment Closure. Accordingly, the associated unresolved item 50-269/00-05-11 is considered closed.

Should you have any questions regarding this letter, please contact Binoy B. Desai, Acting Chief, Reactor Projects Branch 1, at 404-562-4550.

Sincerely,

/RA/

Loren R. Plisco, Director
Division of Reactor Projects

Docket Nos: 50-269, 50-270, 50-287
License Nos: DPR-38, DPR-47, DPR-55

Enclosure: Notice of Violation

cc: (see page 4)

DEC

4

cc w/encls:

Compliance Manager (ONS)
Duke Energy Corporation
Electronic Mail Distribution

Peggy Force
Assistant Attorney General
N. C. Department of Justice
Electronic Mail Distribution

Lisa Vaughn
Legal Department (PB05E)
Duke Energy Corporation
422 South Church Street
Charlotte, NC 28242

Anne Cottingham
Winston and Strawn
Electronic Mail Distribution

Mel Fry, Director
Division of Radiation Protection
N. C. Department of Environmental
Health & Natural Resources
Electronic Mail Distribution

Henry J. Porter, Director
Div. of Radioactive Waste Mgmt.
S. C. Department of Health and
Environmental Control
Electronic Mail Distribution

R. Mike Gandy
Division of Radioactive Waste Mgmt.
S. C. Department of Health and
Environmental Control
Electronic Mail Distribution

County Supervisor of
Oconee County
415 S. Pine Street
Walhalla, SC 29691-2145

Lyle Graber, LIS
NUS Corporation
Electronic Mail Distribution

Manager
Nuclear Regulatory Licensing
Duke Energy Corporation
526 S. Church Street
Charlotte, NC 28201-0006

Distribution w/encls:

W. Travers, EDO
W. Kane, DEDRP
S. Collins, NRR
W. Borchardt, NRR
L. Chandler, OGC
D. Dambly, OGC
E. Julian, SECY
B. Keeling, OCA
Enforcement Coordinators
RI, RIII, RIV
E. Hayden, OPA
G. Caputo, OI
H. Bell, OIG
W. Dean, NRR
M. Johnson, NRR
L. Dudes, NRR
D. LaBarge, NRR
S. Rosenberg, OEDO
F. Congel, OE
C. Christensen, RII
L. Plisco, RII
W. Rogers, RII
R. Haag, RII
S. Sparks, RII
M. Shannon, RII
C. Evans, RII
R. Carroll, RII
R. Hannah, RII
K. Clark, RII
PUBLIC
OEMAIL
OEWEB

OFFICE	RII:DRS	RII:DRP	RII:EICS	OE	NRR	
SIGNATURE	VIA PHONE	LPLISCO FOR	SES FOR	VIA PHONE	VIA PHONE	
NAME	WROGERS	VMCCREE	CEVANS	FCONGEL	LDUDES	
DATE	8/2/02	8/2/02	7/29/02	7/29/02	729/02	

NOTICE OF VIOLATION

Duke Energy Corporation
Oconee Nuclear Station
Units 1, 2 and 3

Docket Nos.: 50-269, 50-270, 50-287
License Nos.: DPR-38, DPR-47, DPR-55
EA-02-048

During an NRC inspection completed on April 8, 2002, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy), the violation is listed below:

Technical Specification 5.4.1a. requires that written procedures be established, implemented, and maintained for the applicable procedures recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A, February 1978. RG 1.33, Section 6.h. of Appendix A, recommends procedures for combating the loss of shutdown cooling.

Abnormal Procedure AP/1,2,3/A/1700/26, Loss of Decay Heat Removal, was established and implemented by Oconee Nuclear Station to combat the loss of shutdown cooling.

Contrary to the above, AP/1,2,3/A/1700/26, Revision 10, was not adequately established to assure that containment closure would be achieved prior to the time at which a core uncover and fission product release could result from a loss of shutdown cooling. Specifically, the immediate manual actions of AP/1,2,3/A/1700/26 to establish containment closure lacked sufficient instructions to ensure that operators would not rely on a non-qualified temporary emergency hatch cover for containment closure; but instead, disconnect temporary services running through the temporary cover and shut the outer emergency hatch door.

This violation is associated with a White SDP finding.

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence and the date when full compliance was achieved is already adequately addressed on the docket in NRC Inspection Report No. 50-269/00-07, 50-270/00-07, and 50-287/00-07, and in DEC's letter of July 11, 2002. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555 with a copy to the Regional Administrator, Region RII, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS)

Enclosure 1

component of NRC's document system (ADAMS). ADAMS is accessible from the NRC web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 2nd day of August 2002