



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

February 13, 2007

EA-06-294

Duke Power Company, LLC d/b/a  
Duke Energy Carolinas, LLC (Duke)  
ATTN: Mr. B. H. Hamilton  
Site Vice President  
Oconee Nuclear Station  
7800 Rochester Highway  
Seneca, SC 29672

SUBJECT: FINAL SIGNIFICANCE DETERMINATION FOR A WHITE FINDING AND  
NOTICE OF VIOLATION (Oconee Nuclear Station - NRC Inspection Report  
Nos. 05000269/2007006, 05000270/2007006, and 05000287/2007006)

Dear Mr. Hamilton:

The purpose of this letter is to provide you with the Nuclear Regulatory Commission's (NRC) final significance determination for a finding involving Duke Power Company's identification of foreign material in the Oconee Nuclear Station Unit 3, A and B train reactor building emergency sump (RBES) suction lines during the Unit 3 end-of-cycle 22 refueling outage. The finding was initially documented in NRC Integrated Inspection Report Nos. 05000269/2006003, 05000270/2006003, and 05000287/2006003 dated July 28, 2006.

NRC Inspection Report Nos. 05000269/2006018, 05000270/2006018, and 05000287/2006018 dated November 30, 2006, documented the NRC's assessment of the finding under the significance determination process and concluded that the finding was preliminarily a greater than Green issue (i.e., an issue of at least low to moderate safety significance which may require additional NRC inspection). The cover letter to our November 30, 2006, inspection report provided Duke an opportunity to request a regulatory conference on this matter. Duke requested a regulatory conference, which was held in the NRC's Region II Office on January 17, 2007. A list of attendees and information presented by Duke and the NRC are enclosed.

After carefully considering the information developed during the inspection and the information presented by Duke at the conference, the NRC has concluded that the final inspection finding is appropriately characterized as White for Unit 3 in the Mitigating Systems cornerstone. Due to the uncertainties associated with debris movement, pump seal failure due to debris interaction, and equipment performance in a high temperature/humidity environment, the staff relied on engineering judgement to establish reasonable assumptions for the significance determination. The results of this engineering judgement were generally more conservative than Duke's input. In addition, the applicable initiating event frequencies used by the NRC staff in the final significance determination are consistent with the agency's previous significance determinations of inspection findings under the Reactor Oversight Process. Consequently, a change in core damage frequency of greater than  $1E-5$ /year numerically derived in the preliminary significance determination was not justified, and a reduction below  $1E-6$ /year was not reasonable. As such, the NRC concluded that the finding is appropriately characterized as White.

You have 30 calendar days from the date of this letter to appeal the staff's determination of significance for the identified finding. Such appeals will be considered to have merit only if they meet the criteria given in NRC Inspection Manual Chapter 0609, Attachment 2.

The NRC also has determined that this finding resulted in a violation of Technical Specification 5.4.1, "Procedures," and Section 9.e of the referenced Regulatory Guide 1.33 for the failure to comply with Nuclear System Directive 104, "Material Condition/Housekeeping, Cleanliness/Foreign Material Exclusion, and Seismic Concerns," by not maintaining the Unit 3 RBES free of foreign material. The violation is cited in the enclosed Notice of Violation (Notice), and the circumstances surrounding the violation are described in detail in NRC Inspection Report Nos. 05000269/2006003, 05000270/2006003, and 05000287/2006003. In accordance with the NRC Enforcement Policy, the Notice is considered escalated enforcement action because it is associated with a White finding.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

For administrative purposes, this letter is issued as a separate NRC Inspection Report, Nos. 05000269/2007006, 05000270/2007006, and 05000287/2007006, and the above violation is identified as VIO 05000287/2007006-01, White Finding - Inadequate Foreign Material Exclusion Controls for the Unit 3 A and B Train Reactor Building Emergency Sump Suction. Accordingly, Apparent Violation (AV) 05000287/2006018-01 is closed.

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

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS) which is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, any response should not include any personal privacy, proprietary, classified, or safeguards information so that it can be made available to the public without redaction. The NRC also includes significant enforcement actions on its Web site at [www.nrc.gov](http://www.nrc.gov); select **What We Do, Enforcement**, then **Significant Enforcement Actions**.

Duke Power Company

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Should you have any questions regarding this letter, please contact Mr. James Moorman, Chief, Branch 1, Division of Reactor Projects, at (404)562-4647.

Sincerely,

/RA/

William D. Travers  
Regional Administrator

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

Enclosures:

1. Notice of Violation
2. List of Attendees
3. Licensee Presentation Material
4. NRC Presentation Material

cc w/encls: (See page 4)

Duke Power Company

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cc w/encls:

B. G. Davenport  
Compliance Manager (ONS)  
Duke Energy Corporation  
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County Supervisor of  
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and Industry Affairs  
Duke Energy Corporation  
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Charles Brinkman  
Director, Washington Operations  
Westinghouse Electric Company  
12300 Twinbrook Parkway, Suite 330  
Rockville, MD 20852

Distribution w/encls:

L. Reyes, EDO  
 J. Dyer, NRR  
 L. Chandler, OGC  
 J. Moore, OGC  
 E. Julian, SECY  
 D. Decker, OCA  
 Enforcement Coordinators  
     RI, RII, RIV  
 E. Hayden, OPA  
 G. Caputo, OI  
 H. Bell, OIG  
 R. Pascarelli, NRR  
 C. Carpenter, OE  
 L. Trocine, OE  
 V. McCree, RII  
 H. Christensen, RII  
 C. Casto, RII  
 J. Shea, RII  
 J. Moorman, RII  
 D. Rich, RII  
 S. Sparks, RII  
 L. Slack, RII  
 C. Evans, RII  
 R. Carroll, RII  
 R. Hannah, RII  
 K. Clark, RII  
 PUBLIC  
 OEMAIL  
 OEWEB

PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE       NON-SENSITIVE

ADAMS:  Yes    ACCESSION NUMBER: \_

OFFICE	RII:EICS	RII:DRP	RII:DRS	NRR	OE	RII
SIGNATURE	/RA/	/RA/	VIAEMAIL/RA/			/RA/
NAME	EVANS	CCASTO	WROGERS	RPASCARELLI	DSOLORIO	VMCCREE
DATE	02/02/07	02/02/07	2/2/07	02/06/07	02/08/07	02/12/07
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO		

## NOTICE OF VIOLATION

Duke Power Company  
Oconee Nuclear Station  
Unit 3

Docket Nos. 50-287  
License Nos. DPR-55  
EA-06-294

During an NRC inspection completed on November 20, 2006, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Technical Specification 5.4.1 requires that written procedures shall be established, implemented, and maintained as recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A, February 1978.

Section 9.e of RG 1.33 recommends procedures be prepared for control of maintenance, repair, replacement, and modification work.

Nuclear System Directive 104, "Material Condition/Housekeeping, Cleanliness/ Foreign Material Exclusion, and Seismic Concerns," contains requirements to prevent foreign object entry into plant systems and components.

Contrary to the above, some time prior to and for the duration of Oconee Unit 3 operating cycle 22 [December 24, 2004 (Mode 4 towards startup) through April 29, 2006 (Mode 5 for the end-of-cycle refueling outage)]; adequate foreign material exclusion controls had not been implemented in that on April 30 and May 1, 2006, foreign material was discovered in the A and B train reactor building emergency sump suction lines.

This violation is associated with a White significance determination process finding for Unit 3, in the Mitigating Systems cornerstone.

Pursuant to the provisions of 10 CFR 2.201, Duke Power Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to the Regional Administrator, Region II, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice of Violation (Notice) within 30 days of the date of the letter transmitting this Notice. This reply should be clearly marked as a "Reply to a Notice of Violation; EA-06-294" and should include: (1) the reason for the violation or, if contested, the basis for disputing the violation or severity level; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; and (4) the date when full compliance will be achieved. Your response may reference or include previously docketed correspondence if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

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, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS) accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within 2 working days.

Dated this 13<sup>th</sup> day of February 2007

## LIST OF ATTENDEES

### NUCLEAR REGULATORY COMMISSION

L. Bradford, Reactor Inspector, Division of Reactor Safety (DRS), Region II (RII)  
P. Capehart, DRS, RII  
R. Carroll, Senior Project Engineer, Division of Reactor Projects (DRP), RII  
J. Circle \*\*, Office of Nuclear Reactor Regulation (NRR)  
C. Evans, Enforcement Officer and Regional Counsel, RII  
C. Even, Reactor Inspector, DRS, RII  
M. Franovich \*\*, NRR  
G. Gardner, Reactor Inspector, DRS, RII  
R. Haag, DRS, RII  
A. Issa, Reactor Inspector, DRS, RII  
R. Jervey \*\*, NRR  
W. Lewis, Reactor Inspector, DRS, RII  
B. McKay, Reactor Inspector, DRS, RII  
S. Meng Wong \*\*, NRR  
B. Miller, Reactor Inspector, DRS, RII  
R. Moore, Senior Reactor Inspector, DRS, RII  
J. Moorman, Chief, Branch 1, DRP, RII  
L. Olshan \*\*, NRR  
J. Oxendine \*\*, NRR  
B. Pascarelli \*\*, NRR  
D. Rich, Senior Resident Inspector, DRP, RII  
D. Solorio \*\*, Office of Enforcement (OE)  
S. Sparks, Senior Enforcement Specialist, RII  
R. Taylor, Resident Inspector, DRS, RII  
W. Travers, Regional Administrator, RII  
L. Trocine \*\*, OE  
S. Unikewicz \*\*, NRR  
A. Zografos \*\*, NRR  
W. Rogers \*, DRS, RII

### DUKE POWER COMPANY/DUKE ENERGY CAROLINAS (DEC)

M. Barrett, Duke PRA Principal Engineer, DEC  
S. Capps, Oconee MCE Engineering Manager, DEC  
G. Davenport, Oconee Regulatory Compliance Manager, DEC  
M. Glover, Oconee Engineering Manager, DEC  
C. Gray, Oconee Regulatory Compliance Manager, DEC  
B. Hamilton, Duke Energy Carolinas (DEC), Vice-President, Oconee Project  
B. Meixell, Oconee Regulatory Compliance Manager, DEC  
S. Nader, Duke PRA Engineering Supervisor, DEC  
L. Nicholson, Oconee Safety Assurance Manager, DEC  
J. Patterson, Oconee MCE Engineering Supervisor, DEC

### Other/Public Attendees

B. Rivard, Chattooga Conservancy Board Member, Board Secretary

\* Attended via telecom

\*\* Attended via video telecom

## **AGENDA**

OPEN REGULATORY CONFERENCE

OCONEE NUCLEAR STATION

January 17, 2007

NRC REGION II OFFICE, ATLANTA, GA.

- I. OPENING REMARKS, INTRODUCTIONS AND MEETING INTENT  
Mr. C. Casto, Director, Division of Reactor Projects (DRP)
- II. NRC REGULATORY CONFERENCE POLICY  
Mr. J. Moorman, Chief, Branch 1, DRP
- III. STATEMENT OF THE ISSUE WITH RISK PERSPECTIVES  
Mr. J. Moorman, Chief, Branch 1, DRP
- IV. SUMMARY OF APPARENT VIOLATION  
Mr. J. Moorman, Chief, Branch 1, DRP
- V. LICENSEE RISK PERSPECTIVE PRESENTATION
- VI. LICENSEE RESPONSE TO APPARENT VIOLATION
- VII. BREAK/NRC CAUCUS  
Mr. C. Casto, Director, DRP
- VIII. CLOSING REMARKS  
Mr. C. Casto, Director, DRP

## **Draft Apparent Violation**

Technical Specification 5.4.1 requires that written procedures shall be established implemented and maintained as recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A, February 1978. Section 9.e of RG 1.33 recommends procedures be prepared for control of maintenance, repair, replacement, and modification work. Nuclear System Directive (NSD) 104, Material Condition/Housekeeping, Cleanliness/Foreign Material Exclusion and Seismic Concerns, contains requirements to prevent foreign object entry into plant systems and components.

Contrary to the above, some time prior to and for the duration of Oconee Unit 3 operating cycle 22 [December 24, 2004 (Mode 4 towards startup) through April 29, 2006 (Mode 5 for the EOC RFO)], adequate foreign material exclusion controls had not been implemented, in that on April 30 and May 1, 2006, foreign material was discovered in the A and B RBES suction lines to the LPI and BS pumps.

Note: The apparent violations discussed at this Regulatory Conference are subject to further review and subject to change prior to any resulting enforcement action.