



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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

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August 31, 2006

EA-06-199

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

SUBJECT: OCONEE NUCLEAR STATION - NRC INSPECTION REPORT  
05000269/2006016, 05000270/2006016, AND 05000287/2006016;  
PRELIMINARY WHITE FINDING

Dear Mr. Hamilton:

On March 31, 2006, the U.S. Nuclear Regulatory Commission (NRC) completed a quarterly integrated inspection at your Oconee Nuclear Station. The inspection findings were documented in NRC Inspection Report 05000269/2006002, 05000270/2006002, and 05000287/2006002, which was issued on April 28, 2006.

Section 1R06b.(1) of that report identified Unresolved Item (URI) 05000269,270,287/2006002-01, which concerned a failure to maintain control of the standby shutdown facility (SSF) flood protection barrier. Subsequent to further inspection, the performance deficiency was identified as a failure to effectively control maintenance activities, and therefore assess and manage the risk, associated with removing the CO<sub>2</sub> access cover (a passive NRC committed flood protection barrier as indicated on Oconee drawing O-310 K-22) in the south wall of the SSF to facilitate installation of temporary electrical power cables. It has been determined that the failure to effectively control and perform a risk assessment for the aforementioned maintenance activity resulted in the following failures to manage risk:

- The failure to expeditiously remove the temporary power cables from the SSF as soon as conditions permitted, and failure to reinstall the 6"x 10" CO<sub>2</sub> supply access cover plate, a passive flood protection barrier, located in the Southwest corner of the SSF Response Room.
- The failure to post and maintain various plant equipment as protected equipment to ensure the operability of the remaining safety-related equipment was not jeopardized.

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- The failure to effectively communicate the elevated risk associated with planned work activities to station personnel to ensure changes in work scope or schedules were elevated to the appropriate personnel for review and assessment.

Consequently, for almost two years (from August 13, 2003, to August 3, 2005) an uncompensated for and uncontrolled flowpath existed through the SSF wall, which could have rendered the SSF unable to perform its intended functions in the event of an external flood in excess of 4.6 feet (800.625 feet above msl).

The staff performed a quantitative risk analysis to estimate the increase in risk from the performance deficiency. The estimated change in core damage frequency was  $3.3 \text{ E }^{-6}$  per year. However, the staff recognized that probabilistic risk estimates for rare events do have large uncertainties and that use of a linear scaling factor for the reduced effective wall height (due to the hole) contains considerable uncertainties in itself. The staff used the best available information since probabilistic based flood distributions to determine the likelihood of flood levels between the hole and wall height were not readily available to provide a more precise risk-based assessment. Given these modeling uncertainties and the need for a risk-informed decision (in lieu of risk-based), the staff also considered qualitative, deterministic information. From a defense-in-depth perspective, the SSF would normally mitigate the hypothetical external flood scenario. If the SSF is unavailable, no other event mitigation systems would be available to prevent core damage. Hence, defense-in-depth may not be preserved. Given both the quantitative and qualitative considerations, the staff has preliminarily determined that the performance deficiency represents a finding that has low-to-moderate risk significance (White). The finding does not represent a current safety concern because the temporary electrical power cables have been removed and the CO<sub>2</sub> access cover reinstalled.

As inferred above, the finding reflects two apparent violations (AVs) associated with removing the CO<sub>2</sub> access cover in the south wall of the SSF to facilitate installation of temporary electrical power: (1) failure to provide adequate procedures to control maintenance activities that could affect safety-related equipment, as required by Technical Specification 5.4.1 and Regulatory Guide 1.33, Section 9.a.; and (2) failure to assess and manage the increase in risk from external floods, as required by 10 CFR 50.65(a)(4), Requirements for monitoring the Effectiveness of Maintenance at Nuclear Power Plants. These apparent violations (respectively identified as AV 05000269,270,287/2006016-01: Inadequate Procedural Controls Over Maintenance Activities Affecting the SSF Flood Protection Barrier and AV 05000269,270,287/2006016-02: Failure to Assess and Manage Risk Associated with Breaching the SSF Flood Protection Barrier) are being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. Accordingly, for administrative purposes, URI 05000269,270,287/2006002-01 is considered closed. The current Enforcement Policy is included on the Nuclear Regulatory Commission's website at <http://www.nrc.gov/reading-rm/adams.html>.

In accordance with Inspection Manual Chapter (IMC) 0609, we intend to complete our evaluation using the best available information and issue our final determination of safety significance within 90 days of the date of this letter. The significance determination process

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encourages an open dialogue between the staff and the licensee; however, the dialogue should not impact the timeliness of the staff's final determination. Before we make a final decision on this matter, we are providing you an opportunity to: (1) present to the NRC your perspectives on the facts and assumptions, used by the NRC to arrive at the finding and its significance, at a Regulatory Conference or (2) submit your position on the finding to the NRC in writing. If you request a Regulatory Conference, it should be held within 30 days of the receipt of this letter and we encourage you to submit supporting documentation at least 1 week prior to the conference in an effort to make the conference more efficient and effective. If a Regulatory Conference is held, it will be open for public observation. The NRC will also issue a press release to announce the conference. If you decide to submit only a written response, such a submittal should be sent to the NRC within 30 days of the receipt of this letter.

Please contact Mr. Mike Ernstes at (404) 562-4540 within 10 business days of the date of your receipt of this letter to notify the NRC of your intentions. If we have not heard from you within 10 days, we will continue with our significance determination and enforcement decisions and you will be advised by separate correspondence of the results of our deliberations on this matter.

Since the NRC has not made a final determination in this matter, a Notice of Violation is not being issued at this time. In addition, please be advised that the number and characterization of the apparent violations may change as a result of further NRC review.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter (without enclosure) and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) 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).

Sincerely,

/RA/

Charles Casto, Director  
Division of Reactor Projects

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

Enclosure:  
SDP Phase 3 Summary (**OFFICIAL USE ONLY -  
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cc w/encl. (See page 4)

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Sincerely,  
/RA/

Charles Casto, Director  
Division of Reactor Projects

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Letter to Bruce H. Hamilton from Charles Casto dated August 31, 2006

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05000269/2006016, 05000270/2006016, AND 05000287/2006016;  
PRELIMINARY WHITE FINDING

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