Duke Energy®

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May 4, 2007

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Subject: Duke Power Company LLC d/b/a Duke Energy Carolinas, LLC (Duke)
McGuire Nuclear Station, Units 1 and 2; Docket Nos. 50-369, 50-370
Catawba Nuclear Station, Units 1 and 2; Docket Nos. 50-413, 50-414
Revision 1 to Methodology Report DPC-NE-1005-P-A, Revision 0, *Nuclear Design Methodology Using CASMO-4/SIMULATE-3 MOX* (Proprietary)

References:
1) Letter, K. S. Canady (Duke), to U.S. Nuclear Regulatory Commission, Topical Report DPC-NE-1005P, Revision 0, *Nuclear Design Methodology Using CASMO-4/SIMULATE-3 MOX,* August 3,2001.
2) Letter, Robert E. Martin (NRC) to H. B. Barron (Duke), Final Safety Evaluation for Duke Topical Report DPC-NE-1005P, *Nuclear Design Methodology Using CASMO-4/SIMULATE-3 MOX,* August 20, 2004.

In Reference 1 Duke submitted methodology report, DPC-NE-1005-P, *Nuclear Design Methodology Using CASMO-4/SIMULATE-3 MOX,* for NRC staff review and approval. The NRC staff accepted this methodology report and transmitted their safety evaluation to Duke in Reference 2. The original approval of the CASMO-4/SIMULATE-3 MOX methodology was for performing nuclear design calculations for McGuire and Catawba reactor cores containing low enriched uranium fuel, and for the use of up to four MOX lead test assemblies in one of the Catawba units. Revision 1 to this report is being submitted for the purpose of extending the previously approved methodology to reactor cores containing gadolinia fuel. This revision primarily consists of Appendix B to DPC-NE-1005-P (included as Attachment 1) which presents benchmark calculations to operating data from reactor cores containing gadolinia fuel and to data from critical experiments containing gadolinia fuel. In addition, changes are also made to the original content of this report to address the inclusion of the gadolinia methodology in the report, to correct typographical errors, and to perform editorial revisions to add clarity. These changes are provided as Attachment 2.

The methodology described in Appendix B to DPC-NE-1005-P will be used to perform nuclear design calculations for reactor cores containing gadolinia. The first application will be to support the Catawba 1 Cycle 19 core design with fuel receipt scheduled for November 19, 2009.

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Revision 1 to this report contains information that is proprietary to Duke. In accordance with 10 CFR 2.390, Duke requests that this information be withheld from public disclosure. An affidavit attesting to the proprietary nature of this information is included with this letter.

In summary, DPC-NE-1005-P, Revision 1 encompasses Attachments 1 and 2. Attachment 1 provides Appendix B to DPC-NE-1005-P and Attachment 2 provides change pages to the original report.

A complete non-proprietary version of this report with proprietary information bracketed and removed will be provided upon approval.

Duke is requesting that the review and approval of this methodology report be completed by May 1, 2008 to support the Catawba Unit 1 cycle 19 core design which will contain gadolinia fuel.

If there are any questions or additional information is needed on this matter, please contact D. E. Bortz at (704) 382-6793.

Sincerely,

Thomas C. Geer

Attachments

xc:

W. D. Travers, Region II Administrator
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NRC Senior Resident Inspector
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AFFIDAVIT OF THOMAS C. GEER

1. I am Vice President Nuclear Engineering and as such have the responsibility of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear plant licensing and am authorized to apply for its withholding on behalf of Duke.

2. I am making this affidavit in conformance with the provisions of 10 CFR 2.390 of the regulations of the Nuclear Regulatory Commission (NRC) and in conjunction with Duke's application for withholding which accompanies this affidavit.

3. I have knowledge of the criteria used by Duke in designating information as proprietary or confidential.

4. Pursuant to the provisions of paragraph (b) (4) of 10 CFR 2.390, the following is furnished for consideration by the NRC in determining whether the information sought to be withheld from public disclosure should be withheld.

   (i) The information sought to be withheld from public disclosure is owned by Duke and has been held in confidence by Duke and its consultants.

   (ii) The information is of a type that would customarily be held in confidence by Duke. The information consists of analysis methodology details, analysis results, supporting data, and aspects of development programs, relative to a method of analysis that provides a competitive advantage to Duke.

   (iii) The information was transmitted to the NRC in confidence and under the provisions of 10 CFR 2.390, it is to be received in confidence by the NRC.

   (iv) The information sought to be protected is not available in public to the best of our knowledge and belief.

   (v) The proprietary information sought to be withheld in the submittal is that which is marked in the proprietary version of Revision 1 to the Duke methodology report DPC-NE-1005-P, *Nuclear Design Methodology Using CASMO-4/SIMULATE-3 MOX*. This information enables Duke to:

   (a) Support license amendment and Technical Specification revision request for its McGuire and Catawba reactors.

   (b) Perform nuclear design calculations on McGuire and Catawba reactor cores containing low enriched uranium fuel with and without gadolinia.

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(vi) The proprietary information sought to be withheld from public disclosure has substantial commercial value to Duke.

(a) Duke uses this information to reduce vendor and consultant expenses associated with supporting the operation and licensing of nuclear power plants.

(b) Duke can sell the information to nuclear utilities, vendors, and consultants for the purpose of supporting the operation and licensing of nuclear power plants.

(c) The subject information could only be duplicated by competitors at similar expense to that incurred by Duke.

5. Public disclosure of this information is likely to cause harm to Duke because it would allow competitors in the nuclear industry to benefit from the results of a significant development program without requiring a commensurate expense or allowing Duke to recoup a portion of its expenditures or benefit from the sale of the information.

Thomas C. Geer affirms that he is the person who subscribed his name to the foregoing statement, and that all the matters and facts set forth herein are true and correct to the best of his knowledge.

Thomas C. Geer

Subscribed and sworn to me: May 8, 2007
Date

Deborah S. Rome Deborah S. Rome
Notary Public

My Commission Expires: December 19, 2009

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