

**CENG**<sup>SM</sup>

a joint venture of



Constellation  
Energy



EDF

CALVERT CLIFFS  
NUCLEAR POWER PLANT

December 1, 2011

U. S. Nuclear Regulatory Commission  
Washington, DC 20555

**ATTENTION:** Document Control Desk

**SUBJECT:** Calvert Cliffs Nuclear Power Plant  
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318  
Review of Realistic Large Break LOCA Analysis

**REFERENCES:**

- (a) Letter from T. E. Trepanier (CCNPP) to Document Control Desk (NRC), dated November 23, 2009, License Amendment Request – Transition from Westinghouse Nuclear Fuel to AREVA Nuclear Fuel
- (b) Letter from D. V. Pickett (NRC) to G. H. Gellrich (CCNPP), dated February 18, 2011, Amendment Re: Transition from Westinghouse Nuclear Fuel to AREVA Nuclear Fuel

In Reference (a), we requested various Technical Specification changes needed to support a transition from Westinghouse nuclear fuel to AREVA nuclear fuel. In 2011, operation began on Unit 2 with the first core loading of AREVA fuel. Along with the physical fuel change, a change from Westinghouse Turbo fuel design and evaluation methods to AREVA Advanced CE-14 high thermal performance fuel design and evaluation methods was also required. These design and evaluation methods and their acceptance criteria were approved by the Nuclear Regulatory Commission (NRC) in Reference (b) with restrictions.

One restriction provided in Appendix C of each Unit's Operating License is as follows:

*"The approval of the emergency core cooling system evaluation performed in accordance with the methodology of Technical Specification 5.6.5.b.7 shall be valid only for Calvert Cliffs Unit 1, Cycle 21 [Unit 2, Cycle 19]. To remove this condition, Calvert Cliffs shall obtain NRC approval of the analysis of once-and twice-burned fuel for core designs following Unit 1 Cycle 21 [Unit 2, Cycle 19]."*

This license condition is related to one aspect of the methodology used in evaluating the acceptability of once- and twice-burned fuel in future core reloads. Specifically, the NRC staff expressed concern that fuel thermal conductivity degradation concerns expressed in Information Notice 2009-23 were not

A002  
MRA

adequately addressed in the realistic large break loss-of-coolant accident submitted with the original request (Reference a).

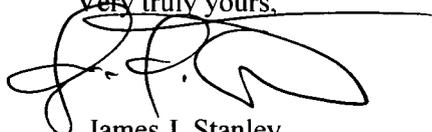
Operation of either Unit beyond the initial cycle loaded with AREVA fuel is not permitted until NRC approval is obtained for the Emergency Core Cooling System evaluation assuming once- and twice-burned AREVA fuel. This restricts operation of Unit 1 after the 2014 refueling outage and Unit 2 after the 2013 refueling outage. Attachment (1) provides the evaluation of once- and twice-burned fuel for Calvert Cliffs and forms the basis of the request for NRC approval needed for continued operation. This evaluation addresses the specific thermal conductivity degradation issues identified by the NRC staff. The method used to address the issue has been discussed with the NRC staff during the summer and fall of 2011 and the NRC staff indicated that it believed the approach proposed by AREVA is acceptable.

An AREVA evaluation is provided as Attachment (1). This evaluation contains information that is proprietary to AREVA; therefore, it is accompanied by an affidavit signed by AREVA, the owner of the information (Attachment 2). The affidavit sets forth the basis on which the information may be withheld for public disclosure by the Commission, and address, with specificity, the considerations listed in 10 CFR 2.390(b)(4). Accordingly, it is requested that the information that is proprietary to AREVA be withheld from public disclosure. The non-proprietary version of the evaluation (Attachment 3) is included for public disclosure.

Calvert Cliffs plans to refuel and operate with the second cycle of AREVA fuel beginning with the refueling outages in 2013 for Unit 2 and 2014 for Unit 1. Calvert Cliffs requests review and approval of the attached evaluation to allow the second (and subsequent) cycles of operation with AREVA fuel in Units 1 and 2 by January 1, 2013 with an implementation period of 90 days.

Should you have questions regarding this matter, please contact Mr. Douglas E. Lauver at (410) 495-5219.

Very truly yours,



James J. Stanley  
Manager, Engineering Services

JJS/PSF/bjd

Attachments: (1) Proprietary – ANP-3043(P), Calvert Cliffs RLBLOCA Summary Report  
(2) AREVA Proprietary Affidavit  
(3) Non-Proprietary – ANP-3043(NP), Calvert Cliffs RLBLOCA Summary Report

cc: D. V. Pickett, NRC  
W. M. Dean, NRC

Resident Inspector, NRC  
S. Gray, DNR

**ATTACHMENT (2)**

---

**AREVA PROPRIETARY AFFIDAVIT**

---



requested qualifies under 10 CFR 2.390(a)(4) "Trade secrets and commercial or financial information."

6. The following criteria are customarily applied by AREVA NP to determine whether information should be classified as proprietary:

- (a) The information reveals details of AREVA NP's research and development plans and programs or their results.
- (b) Use of the information by a competitor would permit the competitor to significantly reduce its expenditures, in time or resources, to design, produce, or market a similar product or service.
- (c) The information includes test data or analytical techniques concerning a process, methodology, or component, the application of which results in a competitive advantage for AREVA NP.
- (d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for AREVA NP in product optimization or marketability.
- (e) The information is vital to a competitive advantage held by AREVA NP, would be helpful to competitors to AREVA NP, and would likely cause substantial harm to the competitive position of AREVA NP.

The information in the Document is considered proprietary for the reasons set forth in paragraphs 6(b), 6(d) and 6(e) above.

7. In accordance with AREVA NP's policies governing the protection and control of information, proprietary information contained in this Document have been made available, on a limited basis, to others outside AREVA NP only as required and under suitable agreement providing for nondisclosure and limited use of the information.

8. AREVA NP policy requires that proprietary information be kept in a secured file or area and distributed on a need-to-know basis.

9. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

Ch B. McCoy

SUBSCRIBED before me this 29th  
day of November, 2011.

Susan K. McCoy

Susan K. McCoy  
NOTARY PUBLIC, STATE OF WASHINGTON  
MY COMMISSION EXPIRES: 1/10/12

