



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, DC 20555 - 0001**

April 25, 2012

Mr. R.W. Borchardt  
Executive Director for Operations  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**SUBJECT: CHAPTERS 6, 7, 15, AND 18 OF THE SAFETY EVALUATION REPORT WITH OPEN ITEMS ASSOCIATED WITH THE CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 3, COMBINED LICENSE APPLICATION**

Dear Mr. Borchardt:

During the 593<sup>rd</sup> meeting of the Advisory Committee on Reactor Safeguards (ACRS), April 12-14, 2012, we met with representatives of the NRC staff and UniStar Energy Nuclear, Inc., (UniStar or the applicant) to review the following chapters of the Safety Evaluation Report with Open Items associated with the review of the Calvert Cliffs Nuclear Power Plant, Unit 3, Combined License Application:

- Chapter 6, "Engineered Safety Features," (except for Sections 6.2.1, "Containment Functional Design," 6.2.2, "Containment Heat Removal Systems," and 6.3, "Emergency Core Cooling System");
- Chapter 7, "Instrumentation and Controls";
- Chapter 15, "Transient and Accident Analysis"; and
- Chapter 18, "Human Factors Engineering."

Our Evolutionary Power Reactor (EPR) Subcommittee also reviewed these chapters during meetings on April 5, 2011; August 18, 2011; and November 14, 2011. The Calvert Cliffs Nuclear Power Plant, Unit 3, Combined License Application references the U.S. Evolutionary Power Reactor (U.S. EPR) Design Certification Document. Site-specific technical aspects of the use of the U.S. EPR design as well as the open items and the combined license action items identified in each of these Safety Evaluation Report chapters were discussed at these meetings. We also had the benefit of the documents referenced.

## **CONCLUSION AND RECOMMENDATION**

Our reviews of the Safety Evaluation Report with Open Items for Chapters 6 (except for Sections 6.2.1, 6.2.2, and 6.3), 7, 15, and 18 have not identified additional issues that merit consideration by us at this time. These chapters can be moved to Phase 4 of the staff strategy for preparation of the Safety Evaluation Report.

## **DISCUSSION**

We have reviewed the four chapters of the staff's Safety Evaluation Report listed above. We conclude that staff has adequately identified open items that must be resolved prior to finalizing the Safety Evaluation Report. We agree that pathways are available for staff and the applicant to resolve these open items. We agree that exceptions and deviations from the EPR Design Control Document adopted by the applicant are appropriate and properly reflect the particular circumstances of the proposed site for Calvert Cliffs, Unit 3. We have not identified other technical issues that merit further consideration at this time for these Safety Evaluation Report chapters.

These chapters can transfer to Phase 4 of the staff's strategy for preparing the Safety Evaluation Report for the Calvert Cliffs, Unit 3, application. We will look forward to review of the Safety Evaluation Report in Phase 5 when the Open Items have been resolved.

Dr. J. Rempe did not participate in our discussions on this matter.

Sincerely,

/RA/

J. Sam Armijo  
Chairman

## **REFERENCES**

1. AREVA NP Letter, "Submittal of a Partial Combined License Application for the Calvert Cliffs Nuclear Power Plant, Unit 3," 07/13/2007 (ML071980292)
2. AREVA NP Letter, "Submittal of Revision 2 of the Partial Combined License Application for the Calvert Cliffs Nuclear Power Plant, Unit 3," 03/14/2008 (ML080780459)
3. AREVA NP Letter, "Submittal of Revision 6 of the Partial Combined License Application for the Calvert Cliffs Nuclear Power Plant, Unit 3," 09/30/2009 (ML092880200)
4. AREVA NP Letter, "Submittal of Revision 7 of the Partial Combined License Application for the Calvert Cliffs Nuclear Power Plant, Unit 3," 12/20/2010 (ML103620346)

5. NRC Memorandum, transmitting Calvert Cliffs Nuclear Power Plant, Unit 3 Combined License Application - Safety Evaluation with Open Items for Portions of Chapter 6, "Engineered Safety Features," dated 04/01/2011 (ML110630151)
6. NRC Memorandum, transmitting Calvert Cliffs Nuclear Power Plant, Unit 3 Combined License Application - Safety Evaluation with Open Items for Chapter 7, "Instrumentation and Controls," dated 10/17/2011 (ML112730268)
7. NRC Memorandum, transmitting Calvert Cliffs Nuclear Power Plant, Unit 3 Combined License Application - Safety Evaluation with Open Items for Chapter 15, "Transient and Accident Analysis," dated 07/22/2011 (ML102790386)
8. NRC Memorandum, transmitting Calvert Cliffs Nuclear Power Plant, Unit 3 Combined License Application - Safety Evaluation with Open Items for Chapter 18, "Human Factors," dated 10/31/2011 (ML113010081)

5. NRC Memorandum, transmitting Calvert Cliffs Nuclear Power Plant, Unit 3 Combined License Application - Safety Evaluation with Open Items for Portions of Chapter 6, "Engineered Safety Features," dated 04/01/2011 (ML110630151)
6. NRC Memorandum, transmitting Calvert Cliffs Nuclear Power Plant, Unit 3 Combined License Application - Safety Evaluation with Open Items for Chapter 7, "Instrumentation and Controls," dated 10/17/2011 (ML112730268)
7. NRC Memorandum, transmitting Calvert Cliffs Nuclear Power Plant, Unit 3 Combined License Application - Safety Evaluation with Open Items for Chapter 15, "Transient and Accident Analysis," dated 07/22/2011 (ML102790386)
8. NRC Memorandum, transmitting Calvert Cliffs Nuclear Power Plant, Unit 3 Combined License Application - Safety Evaluation with Open Items for Chapter 18, "Human Factors," dated 10/31/2011 (ML113010081)

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Letter to Mr. R.W. Borchardt, EDO, from J. Sam Armijo, ACRS Chairman, dated April 25, 2012

SUBJECT: CHAPTERS 6, 7, 15, AND 18 OF THE SAFETY EVALUATION REPORT WITH  
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PLANT, UNIT 3, COMBINED LICENSE APPLICATION

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