

April 22, 2009

Mr. Greg Gibson
Vice President Regulatory Affairs
UniStar Nuclear Energy
100 Constellation Way
Suite 1400P
Baltimore, MD 21202-3106

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RELATED TO THE ENVIRONMENTAL REPORT FOR THE CALVERT CLIFFS COMBINED LICENSE APPLICATION – DESIGN BASIS ACCIDENT SOURCE TERMS AND NUCLEAR WASTE POLICY ACT STATUS

Dear Mr. Gibson:

During its review of your environmental report, submitted for the Calvert Cliffs Unit 3 combined license application, the U.S. Nuclear Regulatory Commission (NRC) staff determined that additional information is needed to complete its review. The NRC staff's request is provided in Enclosure 1. Please provide the Request for Additional Information (RAI) responses to the NRC under oath or affirmation.

Responses should be sent within 30 days of receipt of the RAIs. If you cannot respond in 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30 day period so that the staff can assess how this will impact its resources. In addition, any new and significant changes or additions to information that you have already submitted could impact the time necessary to complete the review.

If you have any questions or comments concerning this matter, I can be reached at 301-415-2220 or by e-mail at Laura.Quinn@nrc.gov.

Sincerely,

/RA/

Laura Quinn
Environmental Project Manager
Environmental Projects Branch 2
Division of Site and Environmental Reviews
Office of New Reactors

Docket No. 52-016

cc: w/enclosure See next page

Enclosure:
As stated

ENCLOSURE

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Enclosure:
As stated

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OFFICIAL OFFICE USE

Request for Additional Information No.1012

UniStar Calvert Cliffs Unit 3
Docket No. 52-016

Design Basis Accidents

ESRP 7.1-1

10 CFR 51.45, 51.75

Background: Environmental Standard Review Plan NUREG-1555, Section 7.1, Design Basis Accidents (DBA), directs the staff to review the applicant's calculated dose consequences presented in the environmental report (ER). The staff also performs a safety review of the dose consequences presented in the applicant's Final Safety Analysis Report (FSAR). The source terms presented in your ER should be consistent with your FSAR for the corresponding accidents. DBA source terms used in the ER are provided in UniStar's environmental RAI response No.147 dated June 12, 2008. However, the source terms provided in RAI response No.147 for the Locked Rotor, Rod Ejection, and Main Steam Line Break accidents are inconsistent with the doses listed for those accidents in the U.S. EPR FSAR (DCD) submitted to the NRC on December 11, 2007, that are incorporated by reference in the COL FSAR.

Provide updated analyses that resolve the inconsistencies noted below:

- 1) The Locked Rotor accident source term in the RAI response No.147 postulates 8% clad failure. However, the DCD Tier 2 section 15.0.3.8 presents dose estimates for 9.5% clad failure.
- 2) The Rod Ejection accident source term in the RAI response No.147 postulates 26% clad failure. However, the DCD Tier 2 Table 15.0-44 and Section 15.0.3.9 presents dose estimates for 36.7% clad failure.
- 3) RAI response No.147 provides source terms for the Main Steam Line Break (MSLB) accident that are inconsistent with the DCD. The differences are (a) the ER includes a source term for the MSLB with 1.24% clad failure, but the DCD does not analyze this case; and (b) the DCD in Tier 2 Section 15.0.3.7 and Table 15.0-34 analyzes the MSLB with 3.3% clad failure and 0.58% full-rod fuel melt, but the ER does not provide source terms for these cases.

ENCLOSURE

Request for Additional Information No.1013

UniStar Calvert Cliffs Unit 3
Docket No. 52-016

Status of Reviews, Approval, and Consultations

ESRP 1.2 -1

10 CFR 51.45d

Background: 10 CFR 51.45(d) states that the environmental report will contain a status of compliance for all federal permits, licenses, approvals and other entitlements which must be obtained in connection with the proposed action and shall also describe the status of compliance with the requirements.

The Nuclear Waste Policy Act (NWPA) states that the Commission shall not issue or renew a license to any person to use a utilization or production facility under the authority of section 103 or 104 of the Atomic Energy Act of 1954 [42 U.S.C. 2133, 2134] unless –

- (i) such person has entered into a contract with the Secretary of Energy for the nuclear waste fund; or
- (ii) the Secretary affirms in writing that such person is actively and in good faith negotiating with the Secretary of Energy for a contract.

Neither Section 1.3 nor Table 1.3-1 in the ER provides a status on the NWPA requirements.

Provide documentation that the requirements in the NWPA have been met or provide a status for meeting the requirements set forth in the NWPA.