

August 11,2006

LICENSEE: AmerGen Energy Company, LLC

FACILITY: Oyster Creek Nuclear Generating Station

SUBJECT: SUMMARY OF A TELEPHONE CONFERENCE CALL HELD ON  
MARCH 16, 2006, BETWEEN THE U.S. NUCLEAR REGULATORY  
COMMISSION AND AMERGEN ENERGY COMPANY, LLC, CONCERNING  
DRAFT REQUESTS FOR ADDITIONAL INFORMATION PERTAINING TO THE  
OYSTER CREEK NUCLEAR GENERATING STATION, LICENSE RENEWAL  
APPLICATION

The U.S. Nuclear Regulatory Commission staff (NRC or the staff), and representatives of AmerGen Energy Company, LLC (AmerGen), held a telephone conference call on March 16, 2006, to discuss and clarify the staff's draft requests for additional information (D-RAIs) concerning the Oyster Creek Nuclear Generating Station license renewal application. The conference call was useful in clarifying the intent of the staff's D-RAIs.

Enclosure 1 provides a listing of the conference call participants. Enclosure 2 contains a listing of the D-RAI discussed with the applicant, including a brief description on the status of the items.

The applicant had an opportunity to comment on this summary.

**/RA/**

Donnie J. Ashley, Project Manager  
License Renewal Branch A  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket No. 50-219

Enclosures:  
As stated

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The U.S. Nuclear Regulatory Commission staff (NRC or the staff), and representatives of AmerGen Energy Company, LLC (AmerGen), held a telephone conference call on March 16, 2006, to discuss and clarify the staff's draft requests for additional information (D-RAIs) concerning the Oyster Creek Nuclear Generating Station license renewal application. The conference call was useful in clarifying the intent of the staff's D-RAIs.

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**/RA/**

Donnie J. Ashley, Project Manager  
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Note to: AmerGen Energy Company, LLC, Facility: Oyster Creek Nuclear Generating Station  
from Donnie Ashley dated August 11, 2006.

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DRAFT REQUEST FOR ADDITIONAL INFORMATION PERTAINING TO THE  
OYSTER CREEK NUCLEAR GENERATING STATION, LICENSE RENEWAL  
APPLICATION

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**LIST OF PARTICIPANTS FOR TELEPHONE CONFERENCE CALL  
TO DISCUSS THE OYSTER CREEK NUCLEAR GENERATING STATION  
LICENSE RENEWAL APPLICATION**

March 16, 2006

**Participants**

Donnie Ashley  
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Chris Sydnor  
Ganesh Cheruvenki  
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Greg Harttraft

**Affiliations**

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**DRAFT REQUESTS FOR ADDITIONAL INFORMATION (D-RAIs)  
OYSTER CREEK NUCLEAR GENERATING STATION  
LICENSE RENEWAL APPLICATION**

March 16, 2006

The U.S. Nuclear Regulatory Commission staff (the staff) and representatives of AmerGen Energy Company, LLC (AmerGen), held a telephone conference call on March 16, 2006, to discuss and clarify the staff's draft requests for additional information (D-RAIs) concerning the Oyster Creek Nuclear Generating Station, license renewal application (LRA). The following D-RAIs were discussed during the telephone conference call.

**D-RAI 4.2.2-1**

Please provide the bounding values for the percentage decrease in the upper-shelf energy (USE) at 50 effective full-power year (EFPY) based on the EMA, as well as the predicted percentage decrease in USE at 50 EFPY, as determined from Regulatory Guide (RG) 1.99, Revision 2, for all Reactor Vessel (RV) beltline materials.

**Discussion:** The applicant indicated that the question is clear. This D-RAI will be sent as a formal RAI.

**D-RAI 4.2.2-2**

In LRA Table 4.2.2-1 in Section 4.0 of the LRA provides the Adjusted Reference Temperature (ART) values for the RV beltline materials. The chemistry data (%Cu and %Ni) and chemistry factor (CF) values for the Lower-to-Lower Intermediate Shell Circumferential Weld 3-564; Lower Shell Axial Welds 2-564A, B, and C; and Lower Intermediate Shell Axial Welds 2-564D, E, and F from Table 4.2.2-1 are less conservative than the corresponding chemistry data and CF values that were established in the staff's reactor vessel integrity database (RVID) for these welds.

Please supplement Section 4.0 of the LRA with the following information:

- a. Verification of whether the chemistry data contained in Table 4.2.2-1 of Section 4.0 are valid for the above welds.
- b. Justification for the use of these chemistry data for the above welds, including the source of the data, and a specific reference for the documentation/analysis demonstrating that these chemistry data represent the best available estimate of the weld chemistries.

**Discussion:** The applicant indicated that the question is clear. This D-RAI will be sent as a formal RAI.

ENCLOSURE 2

#### **D-RAI 4.2.7-1**

Boiling Water Reactor Vessel and Internals Project (BWRVIP)-26, "BWR Vessels and Internals Project, BWR Top Guide Inspection and Flaw Evaluation Guidelines," indicates that BWR stainless steel components exposed to a fluence greater than  $5 \times 10^{20} \text{ n/cm}^2$  ( $E > 1 \text{ MeV}$ ) are susceptible to irradiation assisted stress corrosion cracking (IASCC). The safety evaluation report (SER) for BWRVIP-26 considers IASCC of BWR reactor internals a time-limited aging analysis (TLAA) issue.

In Section 4.2.7, Reactors Internals Components, of the LRA indicates that the core shroud, incore instrumentation dry tubes, and top guide have been exposed to a fluence exceeding  $5 \times 10^{20} \text{ n/cm}^2$  ( $E > 1 \text{ MeV}$ ) and are, therefore, considered susceptible to IASCC, based on fluence calculations performed for these components. However, no TLAA associated with IASCC exists for the core shroud, incore instrumentation drytubes, or top guide.

Please clarify why there is no TLAA for the core shroud, incore instrumentation drytubes, and top guide given that these components have been exposed to a fluence exceeding  $5 \times 10^{20} \text{ n/cm}^2$  ( $E > 1 \text{ MeV}$ ) and are considered susceptible to IASCC.

**Discussion:** The applicant indicated that the question is clear. This D-RAI will be sent as a formal RAI.

#### **D-RAI 4.7.4-1**

In Section 4.7.4, of the LRA Reactor Vessel Weld Flaw Evaluations, includes a discussion of several flaws that were detected in two axial RV welds during inservice inspections performed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME) Code, Section XI and documented in a 2000 Inservice Inspection Report. The flaws were previously evaluated and found to be acceptable for the current licensing period in accordance with the ASME Code, Section XI, IWB-3600. Section 4.7.4 of the LRA indicates that these flaws were reevaluated for conditions of extended operation through 50 EFPY and found to be acceptable in accordance with the American Society of Mechanical Engineers (ASME) Code, Section XI, IWB-3600.

Please submit the analysis demonstrating that these flaws are acceptable in accordance with the ASME Code, Section XI, IWB-3600 for conditions of extended operation through 50 EFPY.

**Discussion:** The applicant indicated that the question is clear. This D-RAI will be sent as a formal RAI.

#### **D-RAI 4.7.5-1**

In Section 4.7.5, of the LRA Control Rod Drive (CRD) Stub Tube Flaw Analysis, includes a discussion of several cracks that were found in the CRD stub tubes during construction and a subsequent repair of the cracks that included grinding out the observed cracks followed by the application of a weld overlay. The LRA indicated that, following the repair, an analysis was performed to demonstrate that any crack that would have remained undetected following the repairs would not propagate through the weld overlay during the life of the plant. Furthermore,



the LRA states that this analysis demonstrated that more than 1000 startup and shutdown cycles would be required in order for any such postulated crack to propagate through the overlay to the surface of the CRD stub tube. The LRA states that this information was provided to the Atomic Energy Commission (AEC) in Amendment 37 to the provisional operating license application.

The cumulative number of startup and shutdown cycles through the end of the period of extended operation is projected to be less than 275. Therefore, the LRA stipulates that the above evaluation remains valid for ensuring CRD stub tube integrity through the end of the period of extended operation.

Given the extent of operating experience since the time of the original analysis, there is a possibility that other CRD stub tube degradation mechanisms that were not known or considered at the time of the original analysis could potentially compromise the integrity of the CRD stub tube over the period of extended operation. Please discuss whether there are any known degradation mechanisms discovered since the time of implementation of the CRD stub tube repair that could potentially invalidate the original analysis discussed above. If any CRD stub tube degradation mechanism is known to exist that was not taken into consideration at the time of the original analysis, thereby, potentially invalidating that analysis, please submit a revised TLAA for the CRD stub tubes demonstrating that the integrity of these components will be maintained over the period of extended operation.

**Discussion:** The applicant indicated that the question is clear. This D-RAI will be sent as a formal RAI.