

March 10, 2006

C. N. Swenson
Site Vice President
AmerGen Energy Company, LLC
P.O. Box 388
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SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE
OYSTER CREEK NUCLEAR GENERATING STATION, LICENSE RENEWAL
APPLICATION (TAC NO. MC7624)

Dear Mr. Swenson:

By letter dated July 22, 2005, AmerGen Energy Company, LLC (AmerGen or the applicant) submitted to the U.S. Nuclear Regulatory Commission (NRC or the staff) an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54 (10 CFR Part 54), to renew the operating license for Oyster Creek Nuclear Generating Station. The NRC staff is reviewing the information contained in the license renewal application and has identified, in the enclosure, areas where additional information is needed to complete the review.

These questions were discussed with members of your staff during several conference calls throughout the week of February 12, 2006. A mutually agreeable date for a response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-415-3191 or via e-mail at DJA1@nrc.gov.

Sincerely,

/RA/

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

Docket No. 50-219

Enclosure:
As stated

cc w/encl: See next page

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ADAMS Accession No.: **ML060550452**

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Oyster Creek Nuclear Generating Station

cc:

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Oyster Creek Nuclear Generating Station

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Ltr. to C.N. Swenson from Donnie Ashley dated: March 10, 2006

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Adams Accession No.: **ML060550452**

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**OYSTER CREEK NUCLEAR GENERATING STATION (OCGS)
LICENSE RENEWAL APPLICATION (LRA)
REQUEST FOR ADDITIONAL INFORMATION (RAI)**

RAI B.1.12-1

The applicant states that “NUREG-1801 indicates that the program covers all bolting within the scope of license renewal including component support and structural bolting. The Oyster Creek Bolting Integrity program does not address structural or component support bolting. The aging management of structural bolting is addressed by the Structures Monitoring Program, B.1.31 and ASME Section XI, Subsection IWE, B.1.27, addresses Primary Containment pressure bolting. Aging management of ASME Section XI Class 1, 2, and 3 and MC support members, is addressed by the ASME Section XI, Subsection IWF program, B.1.28.”

The staff requests the applicant to discuss how these alternate programs meet the intent of the GALL Report and provide assurance of aging management for the component support and structural bolting.

RAI B.2.3-1

In order to prevent corrosion of the components in the Generator Stator Cooling Water System, the applicant has to control several parameters characterizing its cooling water chemistry. By maintaining these parameters within certain predetermined limits, corrosion of the system components can be minimized.

The staff requests the applicant to provide the information concerning the following parameters:

1. Maximum allowable impurity limits in the generator stator cooling water.
2. Range of pH of the generator stator cooling water and how this pH is controlled.
3. Concentrations of oxygen in the generator stator cooling water and how it is controlled.
4. Maximum acceptable value of conductivity of the generator stator cooling water.
5. If any of these parameters get outside of their prescribed range, how long would it take to bring them back into their operating range?

The staff also requests the applicant to address the following:

1. Was the generator stator cooling water chemistry during normal generator operation different from its chemistry during the prolonged periods of inactivity such as, for example, during refueling outages? Please explain.
2. What was the method used by the applicant for inspecting components in the generator stator cooling water system for corrosion? Please explain.

Enclosure

3. Has the presence of copper in the generator stator cooling water ever caused problems with maintaining generator field ground? Please explain.

RAI 2.3.1.6-1

In LRA Page 2.3-22, it was stated that the reactor vessel head spray nozzle is not required to support any intended functions delineated in the rule, and therefore, are not included within the scope of license renewal. It was further stated that a safety assessment for this component was performed and reported in Boiling Water Reactor Vessel and Internals Project (BWRVIP)-06. The staff, however, could not locate the referenced safety assessment in the referenced document. The staff requests the applicant to clarify.

RAI 2.3.1.7-1

In LRA Table 2.3.1.7, the component type, "Top Head Enclosure Vessel Flange Leak Detection Penetration" was listed as within scope subject to aging management review (AMR). However, it is not clear whether the tubes/pipes connected to the penetration were also included within scope. The staff requests the applicant to confirm if the subject tubes/pipes were included in the scope of license renewal; and if not included, the applicant should include the subject components within scope requiring an AMR.

RAI 3.3.2.1.16-1

The GALL Report recognizes the possibility of the existence of aging effects in the Boral used in the spent fuel storage racks and the need for having a plant-specific aging management program. However, in its submittal, the applicant has indicated that its plant degradation of the Boral is insignificant and no aging management program is required. The applicant provided several justifications for not having a management program. In order to verify, the staff requests the applicant to address the following:

- a) Please provide the following specifications of the Boral panels in the HOLTEC designed spent fuel racks:
 1. Geometry of the Boral panels
 2. Areal density of boron
- b) A detailed description of the Boral coupons and the tests performed on them during their examination is needed. Please provide a detailed description for the following:
 1. What was the location of coupons relative to the spent fuel racks?
 2. How were the coupons mounted and were they fully exposed to the spent fuel pool water?
 3. What specific testing procedures and results were used for determining Boron-10 areal density? Verifying surface corrosion, if any, and examine for blister formation?
 4. After removal from the pool for inspection (2 and 4 year exposures), were the coupons inserted back at the same locations in the pool?

- c) Although during the current examinations performed at Oyster Creek, the applicant did not discover any blisters on Boral panels, industry experience has indicated that during longer exposure such blisters may form. Since formation of blisters may affect the efficiency of the Boral panels to attenuate neutrons (through flux trap formation), and may cause deformation of the fuel cells. The applicant should explain why in its plant it will not be a safety concern.

RAI 2.3.3.36-1

In LRA Table 2.3.3.36 for the Shutdown Cooling System, heat exchangers for shutdown cooling were listed as component type within the scope of license renewal. However, for these heat exchangers, leakage/pressure boundary were identified as the only intended functions requiring aging management; but their heat transfer function was not listed. The staff believes that the heat transfer function should also be identified as one of the intended functions of the component type, so that appropriate aging management programs (AMPs) will be designated, such that there will be a reasonable assurance that this safety-related function of the component type does not degrade over the extended period of operation. The staff requests the applicant to clarify why the heat transfer function of the shutdown cooling heat exchangers, in addition to leakage/pressure boundary functions, was not identified as one of the intended functions which needs to be preserved during the extended period of operation.