August 14, 2006

Mr. Christopher M. Crane
President and Chief Executive Officer
AmerGen Energy Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: THREE MILE ISLAND, UNIT 1 - REQUEST FOR ADDITIONAL INFORMATION REGARDING THE STEAM GENERATOR TUBE INTEGRITY TECHNICAL SPECIFICATION AMENDMENT (TAC NO. MD1807)

Dear Mr. Crane:

By letter dated May 15, 2006 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML061420294), AmerGen Energy Company, LLC (AmerGen) submitted a license amendment request regarding Three Mile Island, Unit 1 steam generator (SG) tube integrity Technical Specifications (TSs). The proposed amendment would revise the SG tube integrity TS to be consistent with the Nuclear Regulatory Commission (NRC) approved Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-449, "Steam Generator Tube Integrity," Revision 4 (ADAMS Accession No. ML0510902003).

The NRC staff has reviewed the information provided in the application and has identified the enclosed request for additional information (RAI). This RAI was also e-mailed to the AmerGen staff on July 18, 2006. During a telephone discussion with the AmerGen staff on July 25, 2006, it was agreed that response would be provided by September 15, 2006.

Please contact me at 301-415-1447, if you have any questions.

Sincerely,

/RA/

Farideh E. Saba, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-289

Enclosure:
As stated

cc w/encl: See next page

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ADAMS Accession Number: **ML062130078**

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REQUEST FOR ADDITIONAL INFORMATION
THREE MILE ISLAND UNIT 1 STEAM GENERATOR TUBE INTEGRITY TECHNICAL SPECIFICATION AMENDMENT
TAC NO. MD1807
DOCKET NO. 50-289

1. The Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler (TSTF-449), "Steam Generator Tube Integrity," uses MODES. Please provide the justification for using 250 degrees Fahrenheit (EF) to represent TSTF MODE 4 (HOT SHUTDOWN) and greater than 250EF to represent TSTF MODES 1 (POWER OPERATION), 2 (STARTUP), and 3 (HOT STANDBY), in your proposed Technical Specifications (TS). Alternatively, discuss your plans to modify your proposed TS to be consistent with TSTF-449 in which MODE 4 has an average temperature of greater than 200EF and less 330EF, and MODE 5 (COLD SHUTDOWN) has an average temperature of less than or equal to 200EF.

2. In proposed TS Section 3.1.1.2.b, it would appear that TS Section 3.1.1.2.b(3) would permit you to elect not to plug a tube provided the conditions in TS Section 3.1.1.2.b(1) and TS Section 3.1.1.2.b(2) were met. This is not consistent with TSTF-449. In TSTF-449, the required actions are intended to apply only in the event a tube was inadvertently identified as not being plugged rather than electing not to plug a tube. Please discuss your plans to clarify your TS in this regard and clearly indicate that "separate condition entry" is only allowed for TS Section 3.1.1.2.b(3). For example, "If the requirements of TS 3.1.1.2.b were not met for one or more tubes then perform the following..." In addition, discuss your plans to modify TS Section 3.1.1.2.b(3) to include the AND statement associated with Conditions a and b so that the TS section is consistent with TSTF-449.

3. Please discuss your plans for modifying proposed TS Section 3.1.1.2.b(2) to remove the parenthetical or at a minimum remove "Repair" from the title of TS Section 6.19.

4. It is unclear why "of detection" was added to proposed TS Sections 3.1.1.2.b(4) and TS Section 3.1.6.3. Please provide justification for adding "of detection" to the TS sections, or alternatively discuss your plans to modify these TS sections by removing "of detection."

5. In proposed TS Section 3.1.1.2.b(4) and TS Section 3.1.6.3, HOT STANDBY is referenced. For TMI-1 HOT STANDBY has the reactor critical with an average temperature greater than 525EF. This is inconsistent with TSTF-449. Please discuss your plans to modify these TS sections to be consistent with TSTF-449 in which HOT STANDBY (MODE 3) has a k_{eff} less than 0.99 (i.e., reactor not critical) and an average temperature greater than 330EF.

Enclosure

6. In the proposed Bases for TS Section 3.1.1.2, TS Section 3.1.6.3, and the proposed Bases for TS Section 3.1.6, “through the steam generator tubes” is an unnecessary qualifier when referring to primary-to-secondary leakage. Please discuss your plans to modify the Bases and TS sections to remove this unnecessary qualifier. In addition, please discuss your plans to modify the Bases for TS Section 3.1.1.2 to spell out steam generator.

7. Please clarify the leakage limits in proposed TS Section 3.1.6.3. For example, if the 0.1 gallons per minute (gpm) (144 gallons per day (gpd)) is the sum of the leakage for both steam generators (SG), the TS section may be modified to read, “if the sum of the primary-to-secondary leakage from both steam generators exceeds 0.1 gpm (144 gpd)...” Please discuss your plans to modify the TS to address this issue.

8. Please discuss your plans to modify the proposed Bases for TS Section 3.1.6 by replacing the term “tube leakage” in the third paragraph with “primary-to-secondary leakage.” In addition, please confirm that the proposed insert for the Bases for TS Section 3.1.6 is consistent with the current design and licensing basis for TMI-1.

9. On Page 4-78, the proposed Limiting Condition of Operation (LCO) for TS Section 3.1.1.2.b, third paragraph states that “...a SG tube is defined as the entire length of the tube, including the tube wall and any repairs made to it,...” Please discuss your plans to modify the proposed LCO to remove “and any repairs made to it” given that TMI-1 does not have approved SG tube repair methods.

10. The proposed Bases for TS Section 3.1.1.2.b LCO (Pages 4-79 to 4-80) states that “the accident analysis assumes that accident induced leakage does not exceed 1 gpm per SG, except for specific types of degradation at specific locations where the U.S. Nuclear Regulatory Commission (NRC) has approved greater accident induced leakage.” Please discuss your plans to modify this proposed LCO to further clarify this statement by including a reference to the specific types of degradation. In addition, discuss your plans to modify proposed TS Section 6.19.c to further clarify the accident induced leakage limits for the specific types of degradation. For example, "Leakage from all sources, excluding the leakage attributed to the degradation described in TS Section 6.19.c, is not to exceed 1 gpm per SG."

11. Proposed TS Section 4.19 states, “In these analyses, the steam discharge to the atmosphere is based on the total primary to secondary leakage from all SGs of 1 gallon per minute or is assumed to increase as a result of accident induced conditions.” Please provide justification for removing “...1 gallon per minute or is assumed to increase to 1 gallon per minute...” or alternatively discuss your plans to modify your TS to be consistent with TSTF-449.

12. Proposed TS Section 4.19 states (Page 4-78), “For accidents that do not involve fuel damage, the primary coolant activity level of DOSE EQUIVALENT I-131 is conservatively assumed to be equal to, or greater than, the TS 3.1.4, “Reactor Coolant System Activity,” limits.” The addition “or greater than” is unclear, please provide justification for adding this statement or alternatively discuss your plans to modify your TS to be consistent with TSTF-449.

13. Proposed TS Section 4.19.1 states that each SG is determined to be operable by verifying SG tube integrity in accordance with, and at the frequency required by, the SG Program. Given that the SG Program only provides maximum inspection intervals, this statement is not appropriate. In addition, the maximum intervals provided in the SG Program may not be sufficient to ensure SG tube integrity and therefore, it may be necessary to inspect more frequently to ensure that SG tube integrity is being maintained. Please discuss your plans to remove the statement regarding the SG tube inspection frequency.

14. Given that TMI-1 does not have approved SG tube repair methods, discuss your plans to remove TS Section 6.9.6.i. In addition, for the same reason, discuss your plans to modify TS Section 6.19 by deleting Section 6.19.f.

15. TS Section 6.9.6, Steam Generator Tube Inspection Report, does not appear to carry over reporting requirement 4.19.5.b(3) or 4.19.5.b(6) from the previous TS Section 4.19.5, Reports. Please confirm that both of these reporting requirements are contained in Engineering Change Request (ECR) No. TM 01-00328. If not, please provide justification for not carrying these reporting requirements over or alternatively, discuss your plans to modify TS Section 6.9.6 to include these reporting requirements.

16. Please discuss your plans to modify TS Section 6.9.6 to clearly indicate when the 90-day report should be submitted to the NRC. For example, “A report shall be submitted within 90 days after the plant reaches MODE 4 (using the TSTF-449 definition of MODE 4).” In addition, it is unclear why TS Section 6.19(d) is referenced rather than TS Section 6.19. Please provide justification for referencing TS Section 6.19(d), or alternatively modify TS Section 6.9.6 to reference TS Section 6.19. In addition, discuss your plans to remove reference to “and tube repairs” in proposed TS Section 6.9.6.h.

17. The NRC staff is aware that sleeves were installed in the TMI-1 SGs to stiffen the tubes and not as a SG tube repair method. Please confirm that the tube repair criteria ($40-percent through-wall) is being applied to the parent tube behind the sleeves including the sleeve-to-tube joint. If the repair criteria is not being implemented for the required length of “defect free joint,” discuss your plans for submitting the sleeving method for approval as a repair technique.

18. Please discuss your plans for moving the inspection requirements for implementation of your alternate repair criteria from the repair criteria section to the inspection section (i.e., 6.19.d).

19. Please confirm that the repair limits in current TS Section 4.19.4.6 for inside diameter intergranular attack (IDIGA) are identical to those in ECR No. TM 01-00328.

20. Please discuss why the proposed Bases section for TS Section 4.19 no longer discusses the IDIGA alternate repair criteria. Alternatively, modify your proposed Bases to include a discussion of this alternate repair criteria.

21. Please discuss the purpose of the statement in TS Section 6.19 to “refer to Section 6.9.6 for reporting requirements...” Alternatively discuss your plans to remove this statement.

Note: Although the NRC staff made specific reference to specific sections of TMI-1’s proposed TS, some of the questions may affect multiple locations in your proposal (e.g., use of 250EF instead of 200EF).

Principle Distributor: Leslie S. Miller