May 24, 2007

MEMORANDUM TO: Harold K. Chernoff, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

FROM: G. Edward Miller, Project Manager ***/ra/***
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

SUBJECT: THREE MILE ISLAND UNIT NO. 1 - FACSIMILE TRANSMISSION, DRAFT REQUEST FOR ADDITIONAL INFORMATION REGARDING THE REACTOR COOLANT SYSTEM PRESSURE-TEMPERATURE SAFETY LIMIT (TAC NO. MD4910)

The attached draft request for additional information (RAI) was transmitted by facsimile on May 24, 2007, to Mr. David Distel, at AmerGen Energy Company, LLC (AmerGen). This draft RAI was transmitted to facilitate the technical review being conducted by the Nuclear Regulatory Commission (NRC) staff and to support a conference call with AmerGen in order to clarify certain items in the licensee's submittal. The draft RAI is related to AmerGen's submittal dated March 22, 2007, regarding Three Mile Island, Unit 1 steam generator (SG) tube integrity Technical Specifications (TSs). The draft questions were sent to ensure that the questions were understandable, the regulatory basis for the questions was clear, and to determine if the information was previously docketed. Additionally, review of the draft RAI would allow AmerGen to determine and agree upon a schedule to respond to the RAI. This memorandum and the attachment do not represent an NRC staff position.

Docket No. 50-289

Enclosure:
As stated

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DRAFT

REQUEST FOR ADDITIONAL INFORMATION
THREE MILE ISLAND, UNIT NO. 1 STEAM GENERATOR TUBE INTEGRITY TECHNICAL SPECIFICATION AMENDMENT
TAC NO. MD4910
DOCKET NO. 50-289

By letter dated March 22, 2007 (Agencywide Documents Access and Management System Accession No. ML070860968), AmerGen Energy Company, LLC (the licensee) submitted a license amendment request (LAR) regarding Three Mile Island Unit 1 Technical Specifications (TS). The proposed amendment would revise the reactor coolant system pressure-temperature limit to support use of the AREVA NP Mark-B-HTP fuel design. Based on the review of the information provided by the licensee, the staff has the following additional questions.

1. In your application, you indicate that the transient core penalty for a specific transient core model was calculated based on the largest departure from nucleate boiling (DNB) ratio difference between the limiting Mark-B-HTP fuel rod in a full core model of the mark-B-HTP fuel and specific transient core model for all of the statepoints, condition I/II DNB transients, and axial power shapes.

   Discuss the results of the transient core penalty analyses for condition I/II DNB transients with associated axial power shapes, and demonstrate that (a) the analysis scope in terms of the applicable condition I/II DNB transients and the allowable axial power shapes is adequate, and (b) the calculated value of the transient core penalty is a bounding value and acceptable for determining the thermal design limit that is used to calculate the reactor core safety limit.

2. Discuss the results of the transient and accident analyses for design basis events (DBEs) that are affected by the implementation of Mark-B-HTP fuel assemblies in the TMI-1 core, and demonstrate that no setpoint changes to reactor trip functions, other than the variable low reactor coolant system pressure trip, are needed to assure that the analyses of record remain bounding, or new analyses meet the applicable acceptance criteria for DBEs.

ENCLOSURE