



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 5, 2009

Mr. Charles Pardee
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: THREE MILE ISLAND NUCLEAR STATION, UNIT 1 - REQUEST FOR
ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT REQUEST
TO ADOPT TECHNICAL SPECIFICATION TASK FORCE TRAVELER
TSTF-490-A (TAC NO. ME0100)

Dear Mr. Pardee:

By letter dated November 6, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML083120122), supplemented by letters dated December 11, 2008, (ADAMS Accession No. ML083470249), and July 2, 2009 (ADAMS Accession No. ML091870996), AmerGen Energy Company, LLC (the licensee, now Exelon Generation Company, LLC) submitted a license amendment request regarding proposed changes to the technical specifications (TSs) for Three Mile Island Nuclear Station, Unit 1 (TMI-1). The proposed amendment would replace the current TMI-1 TS limit on Reactor Coolant System (RCS) gross specific activity with a new limit on RCS noble gas specific activity. The noble gas specific activity limit would be based on a new dose equivalent Xenon-133 definition that would replace the current E Bar average disintegration energy definition. In addition, the current dose equivalent Iodine-131 definition would be revised.

The Nuclear Regulatory Commission staff has been reviewing the submittal and has determined that additional information is needed to complete its review. The specific questions are found in the enclosed request for additional information. The questions were sent via electronic transmission on October 26, 2009, to Ms. Wendi Croft of your staff. 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. On November 2, 2009, your staff indicated that a teleconference to discuss the questions was not necessary. It was agreed that a response to the enclosed questions would be submitted by November 27, 2009. If a response is not received by that date, the license amendment request will be subject to denial, pursuant to Title 10 of the *Code of Federal Regulations*, Section 2.108, "Denial of application for failure to supply information."

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Please contact me at 301-415-2833, if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Bamford". The signature is written in a cursive style with a large, looping initial "P".

Peter Bamford, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-289

Enclosure: As stated

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REQUEST FOR ADDITIONAL INFORMATION

THREE MILE ISLAND, UNIT 1

LICENSE AMENDMENT REQUEST TO ADOPT TSTF-490-A,

DELETION OF E BAR DEFINITION AND REVISION TO REACTOR COOLANT

SYSTEM SPECIFIC ACTIVITY TECHNICAL SPECIFICATION

DOCKET NO. 50-289

By letter dated November 6, 2008, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML083120122), supplemented by letters dated December 11, 2008, (ADAMS Accession No. ML083470249), and July 2, 2009 (ADAMS Accession No. ML091870996), AmerGen Energy Company, LLC (the licensee, now Exelon Generation Company, LLC) submitted a license amendment request (LAR) regarding proposed changes to the technical specifications (TSs) for Three Mile Island, Unit 1 (TMI-1). The proposed amendment would replace the current TMI-1 TS limit on Reactor Coolant System (RCS) gross specific activity with a new limit on RCS noble gas specific activity. The noble gas specific activity limit would be based on a new dose equivalent Xenon-133 (DEX) definition that would replace the current E Bar average disintegration energy definition. In addition, the current dose equivalent Iodine-131 (DEI) definition would be revised. The licensee states in the application that the changes are consistent with Technical Specification Task Force (TSTF) change traveler TSTF-490-A, Revision 0, "Deletion of E Bar Definition and Revision to Reactor Coolant System Specific Activity Technical Specification Using the Consolidated Line Item Improvement Process." The Nuclear Regulatory Commission (NRC) staff has been reviewing the submittal and has determined that additional information is needed to complete its review.

In the subject LAR, the licensee proposed TS changes to revise Limiting Condition for Operation (LCO) 3.1.4, "Reactor Coolant System (RCS) Activity," APPLICABILITY requirements and Table 4.1-3, "Minimum Sampling Frequency." The APPLICABILITY requirements are changed to "At all times except REFUELING SHUTDOWN and COLD SHUTDOWN." The proposed change also modifies Item 1.a in Table 4.1-3 to require this surveillance only during POWER OPERATION, even though the APPLICABILITY covers other lower modes. This eliminates the HOT STANDBY, START-UP and HOT SHUTDOWN modes for normal DEX sampling. Similarly, for DEI, Item 1.b.ii is modified to only require sampling during POWER OPERATION, eliminating the START-UP and HOT STANDBY modes. The DEI sampling change is not evaluated by TSTF-490-A, nor is it evaluated in the LAR, beyond a comparison with NUREG-1430 "Standard Technical Specifications Babcock and Wilcox Plants."

Enclosure

The NRC staff has a concern about the proposed changes described above. The proposed changes revise conditions for sampling and may exclude sampling during the plant conditions where LCO 3.1.4 may be exceeded. After transient conditions (i.e. reactor trip, plant depressurization, shutdown or startup) that end in plant conditions other than POWER OPERATION, sampling is not required to be performed. Radioisotopic spiking and (potentially) fuel failures are more likely to occur because of the transient plant conditions (i.e. reactor trip, plant depressurization, shutdown or startup), than at steady state operations. Currently the TMI-1 TSs provide a method for DEI sampling after transients and power changes that change RATED THERMAL POWER more than 15%.

Because LCO 3.1.4 could potentially be exceeded after a plant transient or power change, please justify why sampling for DEX and DEI is no longer needed in the plant conditions or modes that are proposed to be eliminated and justify how the LCO remains consistent with the design bases analysis from which the LCO limits are derived (i.e. main steamline break, steam generator tube rupture etc.). Furthermore, please justify why there is an apparent disparity between the modes of applicability (At all times except REFUELING SHUTDOWN and COLD SHUTDOWN) and the limited mode (POWER OPERATION) under which the surveillances are required.

Please contact me at 301-415-2833, if you have any questions.

Sincerely,

/ra/

Peter Bamford, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-289

Enclosure: As stated

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ADAMS Accession Number: ML092990650

*concurrence via email

OFFICE	LPL1-2/PM	LPL1-2/LA	AADB/BC	LPLI-2/BC
NAME	PBamford	ABaxter	RTaylor	HChernoff
DATE	11/02/09	11/02/09 *	10/19/2009*	11/05/09

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