



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

October 22, 2010

Mr. Michael J. Pacilio  
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 30-DAY NOTIFICATION OF  
CHANGES TO AN EMERGENCY CORE COOLING SYSTEM EVALUATION  
RESULTING IN A PEAK CLADDING TEMPERATURE DIFFERENCE IN  
EXCESS OF 50 DEGREES FAHRENHEIT (TAC NO. ME4666)

Dear Mr. Pacilio:

By letter dated September 7, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102500300), Exelon Generation Company, LLC (Exelon) reported an error correction discovered in the Emergency Core Cooling System evaluation model, or in the application of such a model, that affects the peak cladding temperature (PCT) calculation at Three Mile Island Nuclear Station, Unit 1 (TMI-1). The letter reports an estimated 225 degrees Fahrenheit increase in PCT for a postulated small-break loss-of-coolant accident.

The Nuclear Regulatory Commission staff has been reviewing the submittal and has determined that additional information is needed to complete its review. The specific question is found in the enclosed request for additional information (RAI). The question was sent via electronic transmission on September 30, 2010, to Mr. Thomas Loomis, of your staff. The draft question was sent to ensure that the question was understandable, the regulatory basis for the question was clear, and to determine if the information was previously docketed. The draft question was discussed in a teleconference with Mr. Loomis on October 6, 2010, where it was agreed that no clarification was necessary. Further, in a teleconference with Mr. Loomis on October 8, 2010, it was agreed that a response to this RAI would be provided by November 30, 2010.

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

Sincerely,

A handwritten signature in black ink, reading "Peter Bamford", is positioned above the typed name.

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

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION  
THREE MILE ISLAND UNIT 1  
30-DAY NOTIFICATION OF CHANGES TO  
AN EMERGENCY CORE COOLING SYSTEM EVALUATION  
RESULTING IN A PEAK CLADDING TEMPERATURE DIFFERENCE  
IN EXCESS OF 50 DEGREES FAHRENHEIT  
DOCKET NO. 50-289

By letter dated September 7, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102500300), Exelon Generation Company, LLC (Exelon, the licensee) submitted a notice reporting a change or error discovered in an Emergency Core Cooling System evaluation model or in the application of such a model that affects the peak cladding temperature (PCT) calculation at Three Mile Island Nuclear Station, Unit 1 (TMI-1). This report was submitted pursuant to the requirements of Title 10 of the *Code of Federal Regulations* Section 50.46, which requires, in part, that licensees report a change in the evaluation model used resulting in a significant change in PCT (greater than 50 degrees Fahrenheit (°F)). The intent of this requirement is to enable the U.S. Nuclear Regulatory Commission (NRC) staff to establish the safety significance of this change (See *Federal Register* Volume 53, No. 180, pp. 35996-36005). Because of the magnitude of the reported change, 225°F, and because the means by which this value was determined is not clear in the submittal, the NRC staff does not have sufficient information to establish the safety significance of this change to the evaluation model and has determined that the following additional information is needed to complete its review.

Please provide additional detailed information regarding Exelon's evaluation of the impact of this PCT modeling error. This information should include, but not be limited to, a discussion of the causes of the error and evidence to support a conclusion that the model, as a whole, remains adequate to predict PCT. Please include a discussion of the impact of this error on the full spectrum of postulated break sizes, as well as Exelon's planned corrective actions, and actions to prevent recurrence. If a plant-specific assessment regarding the modeling errors was not performed, please justify the use of any generic evaluation.

Enclosure

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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: ML102730715

\* concurrence via email

OFFICE	LPLI-2/PM	LPLI-2/LA	SRXB/BC	LPL1-2/BC
NAME	PBamford	ABaxter	AUises	HChernoff
DATE	10/8/10	10/19/10	09/29/2010	10/22/10

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