



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

October 4, 2016

LICENSEE: Exelon Generation Company, LLC

FACILITY: Limerick Generating Station, Units 1 and 2

SUBJECT: SUMMARY OF AUGUST 30, 2016, MEETING WITH EXELON GENERATION COMPANY, LLC REGARDING PLANNED LICENSE AMENDMENT REQUEST TO IMPLEMENT RISK-INFORMED TECHNICAL SPECIFICATION COMPLETION TIMES FOR LIMERICK GENERATING STATION, UNITS 1 AND 2 (CAC NOS. MF8267 AND MF8268)

On August 30, 2016, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Exelon Generation Company, LLC (Exelon, the licensee) at NRC Headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The purpose of the meeting was to discuss the licensee's plan to submit a license amendment request (LAR) for the Limerick Generating Station (LGS), Units 1 and 2. The planned submittal would adopt Technical Specifications Task Force (TSTF) Change Traveler TSTF-505, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b." The meeting notice and agenda, dated August 18, 2016, are available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML16242A002. A list of attendees is enclosed.

The licensee presented an overview of its plans to submit the TSTF-505 LAR for LGS, Units 1 and 2. The presentation closely followed Exelon's slides provided for the meeting (ADAMS Accession No. ML16237A241).

The schedule currently calls for the LAR to be submitted by the end of 2016. Exelon indicated that the LAR would impact about 24 technical specification (TS) limiting conditions for operation and about 75 required actions. Exelon discussed the variances from the TSTF-505 model as shown on slides 4 through 16. Some of the differences from TSTF-505 are due to the LGS TSs being based on the original boiling-water reactor (BWR) Standard Technical Specifications (STS) versus the improved STS (i.e., LGS TSs are based on NUREG-0123, not on NUREG-1433). The licensee indicated that LGS would be the first BWR TSTF-505 submittal to the NRC.

As shown on Exelon slides 8 and 12, two of the proposed variances from TSTF-505 are for TS 3.3.4.2, "End-of-Cycle Recirculation Pump Trip System Instrumentation," and TS 3.6.1.3, "Primary Containment Air Lock." These functions are not currently modeled in the LGS probabilistic risk assessment (PRA) models. The licensee stated its plans to update the PRA models after the LAR is submitted to include these functions. The NRC staff indicated that submitting the LAR before completing the underlying PRA models could result in non-acceptance of the LAR for technical review in accordance with Office of Nuclear Reactor Regulation Office Instruction LIC-109, "Acceptance Review Procedures." The NRC staff suggested that the licensee either update the PRA models before submitting the LAR or not include these variances in the submittal.

The NRC staff made a number of comments regarding TSTF-505 issues related to instrumentation and control (I&C) systems. The NRC staff stated that the I&C technical review will focus, in part, on how it will be determined if a total loss of TS specified safety function has occurred, since a risk-informed completion time (RICT) is not allowed in this condition. The NRC staff stated that I&C systems are different from other systems in some fundamental ways. For example:

- (1) Most I&C functions involve coincidence voting, while most other systems do not. This means that for most I&C systems, two or more redundancies must be PRA functional (or there is a loss of function).
- (2) There are unique regulatory requirements for the separation of protection and control functions. This interaction increases the number of channels that must be PRA functional.
- (3) Sensors are used to determine plant parameter values. Some plant parameters are spatially distributed. Regulations require the minimum number and location of sensors (for spatially distributed parameters) be identified in the design-basis documentation. This minimum number and location must be considered when determining if a total loss of function has occurred.

The NRC staff discussed generic TSTF-505 concerns about applying an RICT to components with multiple safety functions. For example, some valves may have a function to open for certain events and close for other events. If the licensee fixes this component in one state (e.g., causes a valve to remain in a closed position), then it could be interpreted that this should be considered a total loss of function. The NRC staff indicated that guidance would be issued in the future regarding the loss of function issue. For the time being, the staff encouraged the licensee to review the NRC's slides from the June 20, 2016, meeting with industry for what the staff envisions as a possible success path on this issue.

The NRC staff also indicated that the large number of proposed variances for the LGS TSTF-505 LAR would result in significantly more time for the NRC review. The staff suggested that the licensee take a close look at the variances and decide which ones it really wants to request.

The licensee indicated that it will use the same procedures for implementation of TSTF-505 throughout the Exelon fleet. The NRC staff will have an opportunity to look at the procedures at an upcoming TSTF-505 audit at the Calvert Cliffs Nuclear Power Plant.

Members of the public were in attendance. No public comments were made during the meeting and no public meeting feedback forms were received.

Please direct any inquiries to me at 301-415-1420 or by e-mail at Rick.Ennis@nrc.gov.

A handwritten signature in black ink, appearing to read "R B Ennis". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Richard B. Ennis, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-352 and 50-353

Enclosure:
List of Attendees

cc w/enclosure: Distribution via Listserv

LIST OF ATTENDEES

AUGUST 30, 2016, MEETING WITH EXELON GENERATION COMPANY, LLC

LIMERICK GENERATING STATION, UNITS 1 AND 2

PLANNED TSTF-505 LICENSE AMENDMENT REQUEST

Name	Organization
Rick Ennis	NRC
Eric Benner	NRC
Margaret Chernoff	NRC
Eric Oesterle	NRC
Robert Beaton	NRC
Norbert Carte	NRC
Stephen Dinsmore	NRC
Joseph Giitter	NRC
Dan O'Neal	NRC
Russ Felts	NRC
Jonathan Evans	NRC
Kim Green	NRC
Stacey Rosenberg	NRC
Ed Miller	NRC
Alex Klein	NRC
Khadijah West	NRC
Doug Broaddus	NRC
Roy Mathew	NRC
Gordon Curran*	NRC
George Budock	Exelon
Glenn Stewart	Exelon
Benjamin Sauers	Exelon
Gene Kelly	Exelon
Arthur Holtz*	Exelon
Victoria Warren	Jensen Hughes
Barry Sloane	Jensen Hughes
Victoria Anderson	Nuclear Energy Institute
Rob Burg*	Engineering Planning and Management, Inc.
Bruce Morgan*	Engineering Planning and Management, Inc.

* by telephone

Members of the public were in attendance. No public comments were made during the meeting and no public meeting feedback forms were received.

Please direct any inquiries to me at 301-415-1420 or by e-mail at Rick.Ennis@nrc.gov.

/RA/

Richard B. Ennis, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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ADAMS Accession No.: ML16245A866

Meeting Notice: ML16242A002 Meeting Slides: ML16237A241

OFFICE	DORL/LPL1-2/PM	DORL/LPL1-2/LA	DE/EICB/BC	DRA/APLA/BC
NAME	REnnis	LRonewicz	MWaters	SRosenberg
DATE	09/13/2016	09/12/2016	09/20/2016	09/30/2016
OFFICE	DORL/LPL1-2/BC	DORL/LPL1-2/PM		
NAME	DBroadus	REnnis		
DATE	10/4/2016	10/4/2016		

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