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

November 18, 2015

Mr. Bryan C. Hanson
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: THREE MILE ISLAND NUCLEAR STATION, UNIT 1 - RELAXATION OF CERTAIN SCHEDULE REQUIREMENTS FOR ORDER EA-12-049 "ISSUANCE OF ORDER TO MODIFY LICENSES WITH REGARD TO REQUIREMENTS FOR MITIGATION STRATEGIES FOR BEYOND DESIGN BASIS EXTERNAL EVENTS" (TAC NO. MF0803)

Dear Mr. Hanson:

The U.S. Nuclear Regulatory Commission (NRC) staff is responding to the request from Exelon Generation Company, LLC (Exelon, the licensee), for relaxation from the schedule requirements of NRC Order EA-12-049 for Three Mile Island Nuclear Station, Unit 1 (TMI). The NRC staff has determined that sufficient good cause exists for the schedule relaxation and has granted the request as described below.

By letter dated March 12, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12054A735), the NRC ordered Exelon to take certain actions at TMI associated with the Fukushima Near-Term Task Force Recommendations. Order EA-12-049 directed that actions be taken by licensees to develop and implement strategies to maintain or restore core cooling, containment cooling, and spent fuel pool cooling capabilities during beyond-design-basis external events (BDBEEs).

Section IV of NRC Order EA-12-049 states that licensees proposing to deviate from requirements contained in the order may request that the Director, Office of Nuclear Reactor Regulation, relax or rescind certain requirements. Condition IV.A.2 of NRC Order EA-12-049 requires full implementation of the order requirements no later than two refueling cycles after submittal of the overall integrated plan (OIP) required by Condition C.1.a, or by December 31, 2016, whichever comes first. The licensee submitted its OIP on February 28, 2013 (ADAMS Accession No. ML13059A299). Therefore, TMI is required to complete full implementation of the requirements of NRC Order EA-12-049 by the end of its fall 2015 refueling outage.

By letter dated October 29, 2015 (ADAMS Accession No. ML15303A080), the licensee informed the NRC of its request for schedule relaxation for TMI from compliance with Order EA-12-049 until no later than April 30, 2016. The schedule relaxation was requested to allow completion and subsequent review by the NRC staff of the TMI turbine building (TB) structural analyses and main steam line integrity evaluations. Exelon is performing analyses of the TMI TB structure and main steam lines to support the implementation of NRC Order EA-12-049 requirements. Specifically, TMI plans to pre-install certain FLEX [Diverse and Flexible Strategies] equipment in the TB as part of the planned strategies to mitigate BDBEEs. Therefore, Exelon must demonstrate that the TB structure will reasonably protect the pre-installed FLEX equipment from

the effects of all BDBEEs applicable to the TMI site. In addition, the integrity of the main steam lines located in the TB must also be demonstrated in order to validate the primary strategies developed to provide a BDBEE mitigation capability for TMI.

The NRC conducted a FLEX onsite audit at TMI on August 10 – 13, 2015. As a result of the FLEX onsite audit and ongoing audit activities, the NRC staff identified that TMI had not developed sufficiently rigorous analyses to justify the use of the TB structure as a FLEX equipment storage facility. Furthermore, TMI had not adequately demonstrated that the TB structure would be capable of supporting personnel activities and FLEX equipment functions after the applicable seismic event as credited in the TMI primary FLEX mitigating strategies. In addition, at the time of the onsite audit, TMI had not yet performed analyses to confirm the post-seismic integrity of the main steam lines located within the TB. The assumption of post-BDBEE integrity of the main steam lines during an extended loss of alternating current power (ELAP) is critical to the validation and success of the primary TMI FLEX strategies. However, without analyses available that adequately support this assumption, the NRC staff was unable to confirm that the main steam lines would remain intact in a seismic event. Exelon's failure to provide the information described above in a timely manner for NRC review resulted in a need to request schedule relaxation for TMI compliance with NRC Order EA-12-049 requirements.

The October 29, 2015, relaxation request states that the additional time will be used to complete the necessary analyses for NRC review and develop and install any potential modifications that may be identified as required to meet the requirements of the order. The licensee also stated that, with the exception of any modifications determined by the ongoing analyses to be necessary to ensure TB and main steam line integrity, all other activities required to comply with Order EA-12-049 requirements will be completed at the conclusion of the fall 2015 refueling outage. These activities include FLEX equipment installation, procedure changes, training, and the validations required to implement the FLEX strategies at TMI.

Notwithstanding the failure by Exelon to develop the analyses and evaluations necessary to support their proposed FLEX storage and implementation strategies in accordance with NRC Order EA-12-049 schedule requirements for TMI, the NRC staff has determined that there is sufficient basis to relax the NRC Order EA-12-049 implementation date to April 30, 2016. The NRC staff considered that, following the accident at Fukushima Dai-ichi, the NRC concluded that a sequence of events such as the Fukushima Dai-ichi accident is unlikely to occur in the United States based on the current regulatory requirements and existing plant capabilities. Given the plant-specific circumstances at TMI, and that implementation of the mitigating strategies relaxed by this letter will be completed well before December 2016, the NRC approves the requested relaxation.

Accordingly, based upon the authority granted to the Director, Office of Nuclear Reactor Regulation, the requirement of implementation of mitigating strategies for TMI associated with Order EA-12-049 is relaxed until no later than April 30, 2016.

If you have any questions, please contact John Hughey at 301-415-3204.

Sincerely,

William M. Dean, Director
Office of Nuclear Reactor Regulation

Docket No. 50-289

cc: Listserv

If you have any questions, please contact John Hughey at 301-415-3204.

Sincerely,

/RA/

William M. Dean, Director
Office of Nuclear Reactor Regulation

Docket No. 50-289

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