



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

October 7, 2014

Mr. Michael J. Pacilio
President and Chief Nuclear Officer
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: BYRON STATION, UNIT 2 – RELAXATION OF THE SCHEDULE
REQUIREMENTS FOR ORDER EA-12-049 “ORDER MODIFYING LICENSES
WITH REGARD TO REQUIREMENTS FOR MITIGATION STRATEGIES FOR
BEYOND-DESIGN-BASIS EXTERNAL EVENTS”

Dear Mr. Pacilio:

By letter dated March 12, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12054A735), the U.S. Nuclear Regulatory Commission (NRC) ordered Exelon Generation Company, LLC (Exelon, the licensee) to take certain actions at Byron Station, Unit 2 (Byron-2), 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, reactor coolant system inventory, containment cooling, and spent fuel pool (SFP) cooling capabilities during beyond-design-basis external events.

Section IV of the order states that licensees proposing to deviate from requirements contained in NRC Order EA-12-049 may request that the Director, Office of Nuclear Reactor Regulation, relax or rescind certain requirements. By letter dated August 29, 2014 (ADAMS Accession No. ML14245A225), the licensee informed the NRC of its request for an extension of one additional refueling cycle to carry out the order requirement of Condition IV.A.2, which requires full implementation of the order requirements no later than two refueling cycles after submittal of the overall integrated plan, or December 31, 2016, whichever comes first. The licensee stated that its mitigation strategies are based on generic Westinghouse reactor coolant pump (RCP) seal leakage rates. Recent Westinghouse evaluations of RCP seal leakage in response to Westinghouse Nuclear Safety Advisory Letter (NSAL) 14-1 indicate that the generic leak rates previously used by the licensee for its mitigation strategy do not envelope calculated leakage rates applicable to the Byron-2 design.

Exelon stated that the Pressurized-Water Reactor Owners Group (PWROG) is in the process of performing additional evaluations to refine RCP seal leakage rate projections, which are part of the technical bases for demonstrating Byron-2 compliance with the requirements of NRC Order EA-12-049. The licensee requests to move the order implementation date for Byron-2 from the completion of the October 2014 refueling outage to the completion of the spring 2016 refueling outage to allow time for Exelon to complete the engineering analysis and procedure changes associated with the final, NRC endorsed RCP Seal leakage analytical basis.

In light of the facts presented in the licensee's August 29, 2014 letter, the NRC staff has determined that the licensee has presented good cause for a relaxation of the order implementation date. Completing the Byron-2 specific engineering analysis of revised generic RCP seal leakage is a significant endeavor that cannot be started until the final RCP seal leakage values have been provided by the PWROG. The schedule for providing the revised RCP seal leakage rate values to Exelon for use in the Byron-2 analysis does not support compliance with Order EA-12-049 by the restart from the October 2014 refueling outage. The NRC staff also 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 Byron-2, completion before December 2016 is consistent with the intent of the order. The NRC staff approves the relaxation of the order implementation date.

Accordingly, based upon the authority granted to the Director, Office of Nuclear Reactor Regulation, the requirement of the order for full order implementation for Byron-2 is relaxed until the completion of the spring 2016 refueling outage to allow the licensee sufficient time to complete the engineering analysis and procedure changes associated with the final, NRC endorsed RCP Seal leakage analytical basis.

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

Sincerely,

A handwritten signature in black ink, appearing to read 'W. M. Dean', with a long horizontal flourish extending to the right.

William M. Dean, Director
Office of Nuclear Reactor Regulation

Docket No. 50-455

cc: Listserv

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Sincerely,

/RA/

William M. Dean, Director
Office of Nuclear Reactor Regulation

Docket No. 50-455

cc: Listserv

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