



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

December 15, 2014

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

SUBJECT: BYRON STATION, UNITS 1 AND 2 - RESPONSE REGARDING PHASE 2  
STAFFING SUBMITTALS ASSOCIATED WITH NEAR-TERM TASK FORCE  
RECOMMENDATION 9.3 RELATED TO THE FUKUSHIMA DAI-ICHI  
NUCLEAR POWER PLANT ACCIDENT (TAC NOS. MF4308 AND MF4309)

Dear Mr. Pacilio:

By letter dated March 12, 2012, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12053A340), the U.S. Nuclear Regulatory Commission (NRC) issued a Request for Information pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.54(f) (hereafter referred to as the 50.54(f) letter), regarding Recommendations 2.1 (seismic and flooding evaluations), 2.3 (seismic and flooding walkdowns), and 9.3 (emergency preparedness communication and staffing) of the Near-Term Task Force (NTTF) review of insights from the Fukushima Dai-ichi accident. With respect to Recommendation 9.3, Enclosure 5 to the NRC's letter requested licensees to assess their means to power communications equipment onsite and offsite during an extended loss of alternating current (ac) power (ELAP) event and to perform a staffing assessment to determine the staff required to fill all necessary positions in response to a multi-unit event.

The 50.54(f) letter in part, required licensee responses pursuant to the provisions of 10 CFR 50.54(f) pertaining to onsite and augmented staff availability to implement the strategies discussed in the emergency plan and/or plant operating procedures including new staff or functions resulting from the assessment, any identified collateral duties, an implementation schedule to perform the assessments, any identified modifications, and any changes that have been made or will be made to the emergency plan regarding on-shift or augmented staffing. In addition, NTTF Recommendation 9.3 has a dependency on the implementation of NTTF Recommendation 4.2 (mitigating strategies). As a result of this dependency, licensees responded to the 50.54(f) letter in phases. The Phase 1 staffing assessment requested licensees to evaluate their ability to respond to a multi-unit ELAP event utilizing existing processes and procedures.

By letter dated April 30, 2013, (ADAMS Accession No. ML13120A274), Exelon Generation Company, LLC (Exelon, the licensee) provided their Phase 1 staffing assessment for Byron Station, Units 1 and 2, which was received and evaluated by the NRC. The NRC staff issued an acknowledgement letter for the Phase 1 staffing submittals to the licensees dated October 23, 2013, (ADAMS Accession No. ML13233A183).

Licensees were also to submit for NRC staff review a Phase 2 staffing assessment, which provides an assessment of the staffing necessary to perform the functions related to the strategies developed in response to NTTF Recommendation 4.2 and the resulting Order EA-12-049, "Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" (ADAMS Accession No. ML12054A736). Licensees were requested to provide their Phase 2 Staffing Assessments to the NRC no later than four months prior to the beginning of their second refueling outage (as used in the context of NRC Order EA-12-049).

By letter dated May 29, 2014 (ADAMS Accession No. ML14149A303), Exelon submitted its Phase 2 staffing assessment for Byron Station, Units 1 and 2 to the NRC in response to the 50.54(f) letter. By letter dated August 21, 2014 (ADAMS Accession No. ML14231A531), the NRC staff issued a request for additional information (RAI) regarding the 10 CFR 50.54(f) Recommendation 9.3, Staffing Assessment for Byron Station. This RAI requested the licensee to provide clarification regarding the process, procedures, and training described in the Phase 2 submittal for the use of supplemental personnel in the response to a beyond-design-basis external event (BDBEE). By letter dated September 19, 2014 (ADAMS Accession No. ML14262A248), Exelon provided a response to the RAI, which included the requested additional information and clarification.

The NRC staff reviewed your Phase 2 assessment for staffing in accordance with the assumptions and guidelines of Sections 2.2, 2.3, and 3 of the Nuclear Energy Institute (NEI) guidance document NEI 12-01, "Guideline for Assessing Beyond-Design-Basis Accident Response Staffing and Communications Capabilities," (ADAMS Accession No. ML12125A412), which was endorsed by the NRC staff by letter dated May 15, 2012, (ADAMS Accession No. ML12131A043). The NRC staff noted that you assessed your current onsite minimum staffing levels to identify any enhancements needed to ensure that the strategies contained in the existing emergency plan and/or plant operating procedures, such as those used in response to an ELAP, can be performed by the site staff. Your assessment assumed that a large-scale natural event causes: (1) all units on the site to be affected, (2) an ELAP, and (3) access to the site to be impeded for a minimum of six hours. You also assessed your capability to perform the site specific functions related to the strategies developed in response to NTTF Recommendation 4.2 and the resulting Order EA-12-049. You conducted independent reviews and concluded, based on your staffing assessment that the existing on-shift minimum staff is sufficient to implement the existing loss of all ac power, multi-unit event response strategies, including those strategies developed to support the requirements of NRC Order EA-12-049, while supporting performance of the required emergency planning duties without unacceptable collateral duties.

The NRC staff reviewed your Phase 2 staffing submittal and confirmed that your emergency response resources, as described in your emergency plan, are sufficient to perform the required plant actions and emergency plan functions, and implement the multi-unit event response

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strategies that were developed in response to NRC Order EA-12-049, without the assignment of collateral duties that would impact the performance of assigned emergency plan functions.

As a result, the NRC staff concludes that your Phase 2 staffing submittal adequately addresses the response strategies needed to respond to a BDBEE using your procedures and guidelines. The NRC staff will verify the implementation of your staffing capabilities through the inspection program.

If you have any questions regarding this letter, please contact Stephen Philpott at (301) 415-2365 or via email at [Stephen.Philpott@nrc.gov](mailto:Stephen.Philpott@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'CPRC', is positioned above the typed name.

Carla P. Roque-Cruz, Acting Branch Chief  
Orders Management Branch  
Japan Lessons-Learned Division  
Office of Nuclear Reactor Regulation

Docket Nos. 50-454 and 50-455

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If you have any questions regarding this letter, please contact Stephen Philpott at (301) 415-2365 or via email at Stephen.Philpott@nrc.gov.

Sincerely,

*/RA/*

Carla P. Roque-Cruz, Acting Branch Chief  
Orders Management Branch  
Japan Lessons-Learned Division  
Office of Nuclear Reactor Regulation

Docket Nos. 50-454 and 50-455

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*\*via email*

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