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**Cc:** [Holden, Leslie E.:\(Exelon Nuclear\)](#); [Simpson, Patrick R.:\(Exelon Nuclear\)](#)  
**Subject:** Request for Additional Information re: Byron/Dresden – Proposed Changes to Site Emergency Plans to Support Post-Shutdown and Permanently Defueled Conditions (EPID-2020-LLA-0240 & EPID-2020-LLA-0237)  
**Date:** Thursday, February 18, 2021 10:04:34 AM

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Rebecca and Mitch,

By applications dated November 2, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20307A333 and ADAMS Package No. ML20307A433), Exelon Generation Company, LLC (Exelon) requested approval by the U.S. Nuclear Regulatory Commission of proposed changes to the Byron Station Units, 1 and 2 (Byron) and Dresden Nuclear Power Station, Units 1, 2 and 3 (Dresden), Site Emergency Plans (SEPs), to support the planned permanent cessation of reactor operations and permanent defueling of the respective facilities. The proposed changes would revise the on-shift and augmented emergency response organization (ERO) staffing commensurate with the reduced spectrum of credible accidents as a result of these shutdowns and defueled conditions.

The U.S. Nuclear Regulatory Commission (NRC) staff are reviewing your submittal(s) and have identified areas where additional information is needed to complete the review(s). Below, please find requests for additional information (RAIs). These RAIs are equally applicable to both the Byron and Dresden facilities.

On February 4, 2021, the NRC staff provided you with a DRAFT RAI. On February 11, 2021, during a clarification call held between the NRC/Exelon staff, Exelon indicated the RAIs were clearly understood and no additional clarifications would be necessary. As such, the NRC staff will remove the DRAFT designation of these RAIs and determine them to be final. The NRC staff is requesting for Exelon to provide the responses N.L.T. **March 18, 2021**, to allow the staff to complete the safety determinations related to these evaluations. Please inform us should you need to alter this current timeline.

If you have any questions/comments, you can contact either myself or Mr. Joel Wiebe at 301-415-6606/[Joel.Wiebe@nrc.gov](mailto:Joel.Wiebe@nrc.gov).

Thank you.

**Russell S. Haskell II**

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**DRAFT REQUEST FOR ADDITIONAL INFORMATION**

**RE: PROPOSED EMERGENCY PLAN TECHNICAL SPECIFICATION CHANGES FOR  
BYRON STATION, UNIT NOS. 1 AND 2**

DOCKET NOS. STN 50-454 AND STN 50-455

AND

DRESDEN NUCLEAR POWER STATION, UNITS 1, 2 AND 3

DOCKET NOS. 50-10, 50-237 AND 50-249

By applications dated November 2, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20307A333 and ADAMS Package No. ML20307A433), Exelon Generation Company, LLC (Exelon) requested approval by the U.S. Nuclear Regulatory Commission of proposed changes to the for the Byron Station Units 1 and 2 (Byron) and Dresden Nuclear Power Station Units 1, 2 and 3 (Dresden) Site Emergency Plans (SEPs), respectively, to support the planned permanent cessation of operations and permanent defueling of the respective reactors. The proposed changes would revise the on-shift and augmented emergency response organization (ERO) staffing commensurate with the reduced spectrum of credible accidents for the proposed permanently shut down and defueled nuclear power reactor facilities.

Applicable Regulatory Requirements:

- 10 CFR 50.47(b)(1) requires that each principal response organization has staff to respond and to augment its initial response on a continuous basis.
- 10 CFR 50.47(b)(2) requires that the on-shift facility licensee has adequate staffing to provide initial facility accident response in key functional areas is maintained at all times and timely augmentation of response capabilities is available.
- 10 CFR 50.47(b)(9) requires that the on-shift facility licensee has adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.
- Associated guidance in NUREG-0654, Section II.B, Evaluation Criterion B.1.a states that the site-specific ERO is developed.

To complete its review of the TS changes, the U.S. Nuclear Regulatory Commission (NRC) staff requests the following additional information:

**Discussion: (DRAFT-RAI-1a & 1b) – re: Emergency Preparedness Function: Dose Assessment / Projections**

In LAR Attachment 1, Section 5.3.5.a, “Emergency Preparedness Function: Dose Assessment / Projections,” “ON-SHIFT,” states, in part:

The analysis of proposed post-shutdown On-Shift Staffing Assessment concluded that in a permanently defueled condition, the Operations crew can perform all required [site specific] Emergency Plan actions in a timely manner and there are no collateral duties that would prevent the timely performance of emergency plan functions.

**Staff Requests:**

**(DRAFT-RAI-1.a):** Please clarify if the on-shift operations personnel are members of the

Fire Brigade, and if so, who would perform assessment of radiological releases during a fire involving radioactive material or in areas containing radioactive materials requiring a Fire Brigade response?

**(DRAFT-RAI-1.b):** Please clarify if the on-shift operations personnel have actions to perform for implementation the site-specific spent fuel pool mitigation strategies, and if so, does this create a collateral duty that would prevent the timely performance of emergency plan functions (e.g., dose assessment)?

**Discussion: (DRAFT-RAI-2a & 2b) – re: Operations Support Center Radiation Protection Lead**

In LAR, Attachment 3, Section B.3.9, “OSC [Operations Support Center] RP [Radiation Protection] Lead,” “[site-specific] Proposed Revision to Site Emergency Plan,” provides the responsibilities for the managing and supervising OSC team RP personnel, including:

- Conduct of adequate pre-dispatch briefings;
- Ensuring adequate protective equipment and measures have been identified;
- Tracking of OSC team activities while dispatched, and
- Debriefing of team personnel upon return to the OSC.

However, in LAR, Attachment 1, Section 5.3.10.b, “Emergency Preparedness Function: Supervision of Repair Team Activities,” “AUGMENTED ERO” states, in part:

(1) Radiation Protection Supervisor / Lead<sup>1</sup>

Note 1. Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.

Additionally, in LAR, Attachment 3, Figure B-1b, “Emergency Onsite Organization,” states, includes a footnote that states:

<sup>1</sup> Rad Protection Lead responsibilities will be performed by a Rad Protection Pool responder as a collateral function.

Further, in LAR for Byron, Attachment 4, item #95 (pg. 223/230), “ERO Staffing Assessment Matrix,” states the following as noted in the column for the justification/implementing action:

The duties for oversight of the RP OSC staff will be taken as a collateral function for a RP Technician.

**Staff Requests:**

**(DRAFT-RAI-2.a):** Please clarify why the OSC RP Lead position is included since it is a collateral function of another augmenting responder.

**(DRAFT-RAI-2.b):** Additionally, are the RP Technicians trained and qualified to perform

these identified functions?