

Haskell, Russell

From: Haskell, Russell
Sent: Tuesday, March 02, 2021 2:06 PM
To: Steinman, Rebecca L:(Exelon Nuclear); Mathews, Mitchel A:(GenCo-Nuc)
Cc: Holden, Leslie E.:(Exelon Nuclear); Simpson, Patrick R.:(Exelon Nuclear)
Subject: RE: RAIs for Dresden, Units 2 and 3, re: Proposed Defueled Technical Specifications and Revised License Conditions for Permanently Defueled Condition (EPID L-2020-LLA-0239)

Rebecca & Mitch,

By application dated October 29, 2020 (Agencywide Documents Access and Management System Accession No. ML20303A313), Exelon Generation Company, LLC, requested a License Amendment Request re: "Proposed Defueled Technical Specifications and Revised License Conditions for Permanently Defueled Condition" for Dresden Nuclear Power Station, Units 2 and 3. The proposed changes would revise the renewed facility operating licenses and TSs consistent with the permanent cessation of operations and permanent defueling of the reactors.

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 from these RAIs and determine them to be final. The NRC staff is requesting for Exelon to provide the responses N.L.T. **April 1, 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, please contact me.

Thank you.

Russell S. Haskell II

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Licensing Project Manager - NRR/DORL/LPL 3
Dresden Nuclear Power Station, Units 2 and 3
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DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3

DRAFT REQUEST FOR ADDITIONAL INFORMATION RE:

PROPOSED DEFUELED TECHNICAL SPECIFICATIONS AND

REVISED LICENSE CONDITIONS FOR PERMANENTLY DEFUELED CONDITION

DOCKET NOS. 50-237 AND 50-249

By application dated October 29, 2020 (Agencywide Documents Access and Management System Accession No. ML20303A313), Exelon Generation Company, LLC, requested a License Amendment Request re: "Proposed Defueled Technical Specifications and Revised License Conditions for Permanently Defueled Condition" for Dresden Nuclear Power Station, Units 2 and 3. The proposed changes would revise the renewed facility operating licenses and TSs consistent with the permanent cessation of operations and permanent defueling of the reactors.

The provisions in 10 CFR 50.36(c)(6), "Decommissioning," in part, apply only to nuclear power reactor facilities that have submitted the certifications required by 10 CFR 50.82(a)(1). For such facilities, technical specifications involving safety limits, limiting safety system settings, and limiting control system settings; limiting conditions for operation; surveillance requirements; design features; and administrative controls will be developed on a case-by-case basis. In the application the licensee states, "[t]his request applies the principles identified in 10 CFR 50.36(c)(6), Decommissioning, for a facility which has submitted certifications required by 50.82(a)(1) and proposes changes to the Administrative Controls appropriate for the Dresden permanently defueled condition."

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: Final Safety Analysis Report (FSAR)

The Final Safety Analysis Report (FSAR) is the principal document upon which the NRC bases its safety evaluation supporting the issuance of an operating license for a nuclear power plant. The updated FSAR (UFSAR) incorporates changes made to the FSAR in accordance with 10 CFR 50.71(e). The UFSAR serves as a major source of information on the current plant design and supporting analyses.

NRC decommissioning guidance (e.g., RG 1.184) discusses that the FSAR, which provides a licensing basis for the evaluation of licensing activities under 10 CFR 50.59, will have to be updated to cover decommissioning activities.

The Dresden license amendment request (LAR) Attachment 1 states, "[t]he Technical Specifications Bases Control Program is being modified to reflect that once the facility is permanently defueled the title of the UFSAR will be revised to DSAR." LAR Attachment 3, "Markup of Technical Specifications Pages," reflects this proposed change in a markup of TS 5.5.10, "The Technical Specifications (TS) Bases Control Program," by replacing UFSAR with DSAR. DSAR is not a term that is described, defined, or required by NRC regulation. The proposed change, UFSAR revised to DSAR, occurs in two instances within Dresden TS 5.5.10 (emphasis added in bold *italic*):

Dresden TS 5.5.10.b currently states:

Licensees may make changes to Bases without prior NRC approval provided the changes do not require either of the following:

1. a change in the TS incorporated in the license; or
2. a change to the ***UFSAR*** or Bases that requires NRC approval pursuant to 10 CFR 50.59.

Dresden TS 5.5.10.c currently states:

The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the ***UFSAR***.

Staff Requests:

Given that NRC regulations, such as 10 CFR 50.59, are written in terms of FSAR, and DSAR is not a term that is described, defined, or required in NRC regulations;

(DRAFT-RAI-1a): Please explain how the DSAR (replaces UFSAR in TS 5.5.10.b.2 above) will remain subject to the provisions of 10 CFR 50.59?

Additionally, 10 CFR 50.71(e)(6) states, "The updated FSAR [UFSAR] shall be maintained by the licensee until the Commission terminates their license." Given NRC requirements for licensees to maintain the updated

FSAR until the Commission terminates their license and that a DSAR is not described, defined, or required in NRC regulations.

(DRAFT-RAI-1b): Please explain how the Dresden TS Bases (DSAR replaces UFSAR in TS 5.5.10.c above) will be maintained consistent with the updated FSAR under this proposed title change?

Discussion: (DRAFT-RAI-2) - Regulatory Basis/Issue re: New Fuel Handling Accident Analysis

Regulatory Guide 1.183, “*Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors*,” Rev. 0, July 2000 provides the methodology for analyzing the radiological consequences of several design-basis accidents (DBAs) to show compliance with 10 CFR 50.67. Regulatory Guide 1.183 provides guidance to licensees on acceptable application of alternate source term (AST) submittals, including acceptable radiological analysis assumptions for use in conjunction with the accepted AST.

NUREG-0800, “*Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light-Water Reactor] Edition*,” (SRP) Section 15.0.1, “*Radiological Consequence Analyses Using Alternative Source Terms*,” Rev. 0, July 2000 provides review guidance to the staff for the review of alternative source term amendment requests. Section 15.0.1 states that the NRC reviewer should evaluate the proposed change against the guidance in RG 1.183. The dose acceptance criteria for the fuel handling accident (FHA) are a Total Effective Dose Equivalent (TEDE) of 6.3 rem at the exclusion area boundary (EAB) for the worst 2 hours, 6.3 rem at the outer boundary of the low population zone (LPZ), and 5 rem in the control room for the duration of the accident.

In Attachment 1 of the LAR, Exelon states that a new Fuel Handling Accident (FHA) analysis was performed to determine the Control Room (CR), Exclusion Area Boundary (EAB), and Low Population Zone (LPZ) doses at Dresden. This analysis is required to replace the current FHA which only covers FHA events due to a fuel assembly being dropped on the reactor core, which currently bounds the radiological consequences of an FHA in the Spent Fuel Pool.

Staff Request:

The LAR indicates that the analysis conforms to RG 1.183 and that the limits of RG 1.183 continue to be met, however, many of the assumptions and parameters used are not specified and the doses calculated are not specified.

(DRAFT-RAI-2): Please provide sufficient technical details of the new FHA, covering FHAs in the spent fuel pool post-cessation of power operations, to allow for evaluation. The NRC staff requests this information include but not necessarily be limited to; computer program(s) used to calculate dose, key input variables, calculated dose to CR, EAB, and LPZ, source term use in the new FHA analysis, fall height of fuel assembly, water coverage, decontamination factors, and atmospheric dispersion factors.

In addition to the above RAIs, the NRC staff has identified the following apparent editorial errors:

1. There appears to be an editorial error in Attachment 1 of the LAR (pg. 75/85). In the detailed description of the proposed changes to Dresden TS Section 5.5.10, “Technical Specifications (TS) Bases Control Program,” there is a reference to the use of the acronym “DSAR” for the first time in the LAR without spelling it out or providing a description/definition. If DSAR is retained (could be changed based on a response to other questions), please spell out the acronym on its first use in the LAR. This lack of a defined term is similarly reflected in the LAR Attachment 3, TS 5.5.10 TS markup page (document pg. 165/201).
2. There appears to be an editorial error in Attachment 1 of the LAR (pg. 40/85). In the detailed description of the proposed changes to Dresden TS Section 1.1, “Definitions,” for CERTIFIED FUEL HANDLER, the column entitled “Basis for Change” states, “...the LAR proposing changes to TS Sections 1.1 and 5.0 (Reference 2) which is currently under NRC review.” However, the citing of

(Reference 2) appears to be incorrect because (Reference 2) does not propose any changes to TS Sections 1.1 or 5.0. Please identify the correct reference and update the LAR, as appropriate.

3. There is a conflict between LAR Attachment 1 (description of changes) and LAR Attachment 3 (TS markups) regarding proposed changes to TS Section 1.3, "Completion Times." There should be no difference between the changes proposed in LAR Attachment 1 and those reflected in LAR Attachment 3. However, LAR Attachment 3 deletes two additional words "...ensuring safe...". Please identify the desired proposed change and update the LAR as appropriate.
4. There appears to be an editorial error in Attachment 1 of the LAR in the basis discussion for proposed changes to LCO 3.0.1 (pg. 48/85). The last sentence in the LCO 3.0.1 basis discussion refers to deleting the reference to LCO 3.0.9. Since LCO 3.0.1 currently does not refer to LCO 3.0.9, this appears to be an editorial error. Please identify the correct reference and update the LAR as appropriate.
5. There appears to be an editorial error in Attachment 1 of the LAR in the basis discussion (summary section)(pg. 57/85) for proposed changes to TS Section 3.3, "Instrumentation." In the bottom half of the summary section, there is a reference to a proposed new license condition 2.EE (Dresden Unit 3). However, in LAR Attachment 1, in the section which describes proposed changes to license conditions (pg.38/85), refers to the proposed new license condition as 3.EE. Please identify the correct number for the proposed new license condition and update the LAR as appropriate (note, LAR Attachment 1 refers to 2.EE several times and is not limited to TS Section 3.3).
6. There appears to be an editorial error in Attachment 1 of the LAR in the basis discussion for proposed changes to TS 5.5.14. The last sentence in the TS 5.5.14 basis discussion refers to TS 5.5.13. Based on the context, this appears to be an editorial error. Please identify the correct TS reference and update the LAR as appropriate.