

RS-16-042

10 CFR 50.90

February 8, 2016

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Dresden Nuclear Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

Subject: Supplemental Information Supporting License Amendment Request Regarding Spent Fuel Storage Pool Criticality Methodology and Proposed Change to Technical Specification 4.3.1, "Criticality"

- References:**
1. Letter from Patrick R. Simpson (Exelon Generation Company, LLC) to U. S. NRC, "License Amendment Request Regarding Spent Fuel Storage Pool Criticality Methodology and Proposed Change to Technical Specification 4.3.1, 'Criticality'," dated December 30, 2014
 2. Letter from Eva A. Brown (U.S. NRC) to Bryan C. Hanson (Exelon Generation Company, LLC), "Dresden Nuclear Power Station, Units 2 and 3 – Proposed License Condition Regarding the Spent Fuel Pool Nuclear Criticality Safety Analysis Methodology (CAC Nos. MF5734 and MF5735)," dated January 11, 2016
 3. Letter from Patrick R. Simpson (Exelon Generation Company, LLC) to U. S. NRC, "Supplemental Information Supporting License Amendment Request Regarding Spent Fuel Storage Pool Criticality Methodology and Proposed Change to Technical Specification 4.3.1, 'Criticality'," dated October 15, 2015

In Reference 1, Exelon Generation Company, LLC (EGC) requested an amendment to Renewed Facility Operating License Nos. DPR-19 and DPR-25 for Dresden Nuclear Power Station (DNPS), Units 2 and 3, respectively. Specifically, EGC is utilizing a new Criticality Safety Analysis (CSA) methodology for performing the criticality safety evaluation for legacy fuel types in addition to the new ATRIUM 10XM fuel design in the spent fuel pool (SFP). In addition, EGC is proposing a change to the DNPS Technical Specification (TS) 4.3.1, "Criticality," in support of the new CSA. EGC proposes to add a new TS 4.3.1.1.c that will require an in-rack K-infinity limit for the fuel assemblies that are allowed to be stored in the DNPS Units 2 and 3 SFP storage racks.

In Reference 2, the NRC described a proposed license condition that will be necessary to ensure the Boron-10 areal density of the Boral remains at or above its minimum credited value and the TS value of $K_{\text{eff}} < 0.95$ is maintained as part of a SFP Boral coupon surveillance program. Reference 2 requested EGC to provide a response indicating EGC's understanding and acceptance of the license condition.

EGC has reviewed the proposed license condition, and understands that the NRC plans to issue a license condition that will require the following coupon surveillance program performance objectives to be met as described in Reference 2.

1. Ensure that coupon measurements of B^{10} areal density are performed by a qualified laboratory;
2. Ensure that the coupons are removed for evaluation every 10 years;
3. Ensure that should any coupon be identified as failing the minimum certified B^{10} areal density criterion based on coupon test results, EGC will perform in-situ testing to confirm that the minimum B^{10} areal density (0.02 g/cm^2) is met for all panels installed in the DNPS spent fuel pools; and
4. Submit a report to the NRC within 90 days following the completion of evaluations associated with Item 3 above. The report shall include; a description of the testing results, the assessments performed, and the interim and long-term corrective actions for abnormal indications.

EGC understands that the above license condition requires that in the event a coupon is found to fail the minimum certified areal density criterion, in-situ testing of a statistically representative sample of BORAL panels, in accordance with our program, is required to verify that the TS 4.3.1.1.a K_{eff} requirement is met for the spent fuel storage racks. The results of this in-situ testing will be documented in a report submitted to the NRC. Based on this understanding, EGC requests that the NRC revise performance objective 3 above to read as follows:

3. Ensure that should any coupon be identified as failing the minimum certified B^{10} areal density criterion based on coupon test results, EGC will perform in-situ testing of a statistically representative sample of BORAL panels to confirm that the minimum B^{10} areal density (0.02 g/cm^2) is met for all panels installed in the DNPS spent fuel pools; and

The proposed license condition discussed above impacts the regulatory commitments previously made in Attachment 9 to Reference 3. The proposed license condition will replace the need for the commitments specified in Reference 3. Therefore, a revised regulatory commitment summary is attached that supersedes the commitment summary provided in Reference 3 in its entirety.

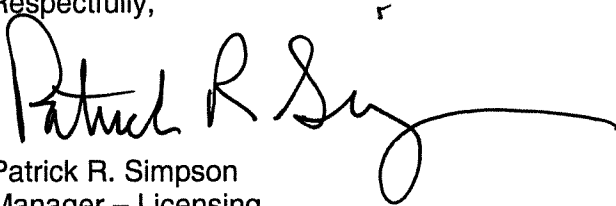
EGC has reviewed the information supporting a finding of no significant hazards consideration, and the environmental consideration, that were previously provided to the NRC in Attachment 1 of Reference 1. The additional information provided in this submittal does not affect the bases for concluding that the proposed license amendment does not involve a significant hazards consideration. In addition, the additional information provided in this submittal does not affect the bases for concluding that neither an environmental impact statement nor an environmental assessment needs to be prepared in connection with the proposed amendment.

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Should you have any questions concerning this letter, please contact Mr. Timothy A. Byam at (630) 657-2818.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 8th day of February 2016.

Respectfully,

A handwritten signature in black ink, appearing to read "Patrick R. Simpson", with a long horizontal flourish extending to the right.

Patrick R. Simpson
Manager – Licensing

Attachment: Summary of Regulatory Commitments

cc: NRC Regional Administrator, Region III
NRC Senior Resident Inspector – Dresden Nuclear Power Station
Illinois Emergency Management Agency – Division of Nuclear Safety

ATTACHMENT

Summary of Regulatory Commitments

The following list identifies those actions committed to by Exelon Generation Company, LLC, (EGC) for Dresden Nuclear Power Station. Any other actions discussed in the submittal represent intended or planned actions by EGC, are described only for information, and are not regulatory commitments.

| COMMITMENT | COMMITTED DATE OR "OUTAGE" | COMMITMENT TYPE | |
|-------------------|-----------------------------------|---------------------------------|------------------------------|
| | | ONE-TIME ACTION (YES/NO) | PROGRAMMATIC (YES/NO) |
| None | | | |