

DRAFT REQUEST FOR ADDITIONAL INFORMATION RELATED TO
LICENSE AMENDMENT REQUEST FOR TECHNICAL SPECIFICATION CHANGES
RELATED TO USE OF NEUTRON ABSORBING SPENT FUEL POOL RACK INSERTS
EXELON GENERATION COMPANY, LLC
PSEG NUCLEAR, LLC
PEACH BOTTOM ATOMIC POWER STATION – UNITS 2 AND 3
DOCKET NO. 50-277 AND 50-278

By letter to the Nuclear Regulatory Commission (NRC) dated November 3, 2011,¹ as supplemented on December 22, 2011,² Exelon Generation Company, LLC, (Exelon) submitted a License Amendment Request (LAR) for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. The proposed amendment would modify the Technical Specifications (TS) to include the use of neutron absorbing spent fuel pool rack inserts for the purpose of criticality control in the spent fuel pools at PBAPS, Units 2 and 3. The NRC staff has reviewed Exelon's submittal and determined that additional information, as described below, is needed to complete the review.

RAI-06: Please confirm that the qualification testing acceptance criterion for the manufactured panels is greater than 0.0105 g/cm² given that the qualification testing acceptance criteria is listed as greater than 0.0087g/cm² on page 3-5 of NET-259-03 Rev 5 (Attachment 5 of the LAR dated November 3, 2011).

RAI-07: Please describe how the 2 rack inserts are selected that will be visually inspected during each insert in-situ inspection per Section 3.9.4.1 of Attachment 1 of the LAR. How will these 2 rack inserts be representative of all inserts in the spent fuel pool (SFP)?

RAI-08: Please clarify whether the insert that will be removed and inspected every 10 years (per Section 3.9.4.2 of Attachment 1 of the LAR) will be re-inserted in the racks, and how the one rack insert selected is going to be representative of all the inserts in the SFP.

Page 15 of Attachment 1 and page 4-6 of Attachment 5 of the LAR describes an estimated stress relaxation of 50% over 20 years of service for the insert material.

RAI-09.1: Please describe how stress relaxation of the inserts will be monitored and the frequency of monitoring. What are the acceptance criteria for stress relaxation? Describe the maximum amount of stress relaxation allowable.

¹ Agencywide Documents Access and Management System (ADAMS) Accession No. ML113081441.

² ADAMS Accession No. ML113570208.

RAI-09.2: Please provide the data and justification of the data extrapolation that determined that over 20 years there would be an estimated 50% stress relaxation.

RAI-10: Please discuss whether the data from the fast start coupon surveillance program at La Salle (described in Section 3.9.2 of Attachment 1 of the LAR) can be used to inform the use of the Peach Bottom inserts given that the SFP environments may not be identical. Please provide the results of this program.

RAI-11: Will the coupons be re-inserted into the SFP after being inspected?

RAI-12: Page 19 of Attachment 1 of the LAR indicates that the areal density will only be measured on select coupons. Please discuss why the areal density measurement is only performed on select coupons as opposed to all of the coupons.

During the insert installation period, storage cells without inserts will be placed into three categories as described in the proposed license condition associated with the LAR. The determination of categories relies on the minimum panel Boron-10 areal density of the Boraflex in the storage cell.

RAI-13.1: Given that all the inserts may not be installed until 2016, what is the frequency for performing RACKLIFE predictions?

RAI-13.2: Given that all the inserts may not be installed until 2016, what is the frequency and sample size of the BADGER measurements?