




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

May 5, 2015

MEMORANDUM TO: Douglas A. Broaddus, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

FROM: Richard B. Ennis, Senior Project Manager 
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNIT 2, DRAFT
REQUEST FOR ADDITIONAL INFORMATION (TAC NO. MF4792)

The attached draft request for additional information (RAI) was transmitted on April 25, 2015, to Mr. Ken Ainger of Exelon Generation Company, LLC (Exelon, the licensee). This information was transmitted to facilitate an upcoming conference call in order to clarify the licensee's request dated February 3, 2015, as supplemented by letters dated March 24, 2015, and April 5, 2015 (ADAMS Accession Nos. ML15034A573, ML15083A559, and ML15096A008, respectively), for NRC approval of a revision to the methodology, previously approved during the extended power uprate review, for establishing the Peach Bottom Atomic Power Station, Unit 2 replacement steam dryer strain limits.

The draft RAI was sent to Exelon to ensure that the questions are understandable, the regulatory basis for the questions is clear, and to determine if the information was previously docketed. This memorandum and the attachment do not convey or represent an NRC staff position regarding the licensee's request.

***Attachment 1 transmitted herewith contains sensitive unclassified information.
When separated from Attachment 1, this document is decontrolled.***

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The NRC staff has determined that Attachment 1 contains proprietary information pursuant to Title 10 of the *Code of Federal Regulations* Section 2.390. Accordingly, the staff has prepared a redacted, publicly available, non-proprietary version (i.e., Attachment 2).

Docket No. 50-277

Attachments:

1. Draft Proprietary RAI (non-publicly available)
2. Draft Non-Proprietary RAI (publicly available)

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DRAFT REQUEST FOR ADDITIONAL INFORMATION
REGARDING REPLACEMENT STEAM DRYER ANALYSIS
EXELON GENERATION COMPANY, LLC
PEACH BOTTOM ATOMIC POWER STATION - UNIT 2
DOCKET NO. 50-277

Proprietary information pursuant to
Title 10 of the *Code of Federal Regulations* (10 CFR) Section 2.390
has been redacted from this document.
Redacted information is identified by blank space enclosed within double brackets
as shown here [[]].

Attachment 2

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On August 25, 2014, the Nuclear Regulatory Commission (NRC) issued Amendment Nos. 293 and 296 to Renewed Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14133A046). These amendments authorized an increase in the maximum licensed thermal power level for PBAPS, Units 2 and 3, from 3514 megawatts thermal (MWt) to 3951 MWt, which is an increase of approximately 12.4%. This change in power level is considered an extended power uprate (EPU).

By letter dated February 3, 2015, as supplemented by letters dated March 24, 2015, and April 5, 2015 (ADAMS Accession Nos. ML15034A573, ML15083A559, and ML15096A008, respectively), Exelon Generation Company, LLC (Exelon, the licensee) requested NRC approval of a revision to the methodology, previously approved during the EPU review, for establishing the PBAPS Unit 2 replacement steam dryer (RSD) strain limits. Exelon's request was submitted to support the continuation of EPU power ascension above 3514 MWt.

By letter dated March 27, 2015 (ADAMS Accession No. ML15033A489), the NRC approved power ascension to 104% of 3514 MWt for PBAPS, Unit 2. By e-mail dated April 10, 2015 (ADAMS Accession No. ML15110A098), the NRC stated it had no objections to continued power ascension to 108% of 3514 MWt. After reaching 108% of 3514 MWt, Exelon collected data regarding steam dryer structural integrity in accordance with EPU license condition 2.C(15). Exelon provided the data and other requested information for NRC staff review on April 22, 2015. At 7:40 pm EDT on April 22, 2015, the NRC staff confirmed receipt of the information. This confirmation started a 96 hour review period, for the 108% hold point, in accordance with the EPU license condition. A conference call was held on April 24, 2015, to discuss this information.

The NRC staff has reviewed the information the licensee provided and has determined that additional information, as described below, needs to be provided to help inform the staff's decision on the acceptability of the proposed change in methodology as well as power ascension beyond 108% of 3514 MWt.

Request for Additional Information (RAI) questions 1 through 9, regarding the revision to the methodology, were addressed in Exelon's letter dated March 24, 2015. RAI question 10 was addressed in Exelon's letter dated April 5, 2015. The information Exelon provided on April 22, 2015, included a response to a supplemental RAI to RAI-10, designated as RAI 10-S1. As such, this RAI is designated as RAI-11.

RAI-11

As described below and detailed in the proprietary attachments to this RAI (Excel and Power Point files), the non-main steam line acoustic (NMSLA) portion of Exelon's evaluation at 108% of 3514 MWt, based on the proposed methodology change, may be under-estimating the dryer stress because the licensee's approach for implementation of steps 2 and 3 of the methodology needs to be corrected. [[

Since the dryer minimum alternating stress ratio (MASR) at the projected extended power uprate (EPU) conditions is 1.09 with a very small margin, the NRC requests the licensee to re-compute the dryer MASRs and demonstrate the structural integrity of the PBAPS Unit 2 replacement steam dryer (RSD) based on the following information.]].

The results from the methodology submitted on April 22, 2015, are not reasonable. While the updated methodology is improved in that it considers [[

]].

Using [[]] could lead to significant stress under-predictions, [[

]].

The licensee is therefore requested to provide an updated stress estimate, [[

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KManoly. NRR/DE

ACCESSION NOS.:

ML15127A530 (package)

ML15127A518 (memo and Attachment 2, public)

ML15131A233 (Attachment 1, non-public)

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