



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

April 16, 2015

**LICENSEE:** Exelon Generation Company, LLC

**FACILITY:** Peach Bottom Atomic Power Station, Unit 2

**SUBJECT:** SUMMARY OF CLOSED MEETING HELD ON MARCH 26, 2015, WITH EXELON GENERATION COMPANY, LLC TO DISCUSS STEAM DRYER ANALYSIS FOR PEACH BOTTOM ATOMIC POWER STATION, UNIT NO. 2 (TAC NO. MF4792)

On March 26, 2013, a closed meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Exelon Generation Company, LLC (Exelon, the licensee). The meeting was held at the Nuclear Energy Institute office located at 11921 Rockville Pike, Rockville, Maryland.

The purpose of the meeting was for Exelon and Westinghouse Electric Company LLC (Westinghouse) to present information regarding a proposed revision to the steam dryer analysis methodology for Peach Bottom Atomic Power Station (PBAPS), Unit 2. The proposed change in methodology was requested in Exelon's letter dated February 3, 2015, as supplemented by letter dated March 24, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML15034A573 and ML15083A559, respectively).

The meeting notice and agenda, dated March 20, 2015, are available in ADAMS at Accession No. ML15079A315. A list of attendees is provided in the Enclosure. The licensee's handout, presented at the meeting, contains proprietary information and is not publicly available.

Background

On August 25, 2014, the NRC issued Amendment Nos. 293 and 296 to Renewed Facility Operating License Nos. DPR-44 and DPR-56 for PBAPS, Units 2 and 3 (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 percent. This change in power level is considered an extended power uprate (EPU).

The NRC staff approval of the EPU was based, in part, on the capability for the licensee to monitor, evaluate, and take prompt action in response to potential adverse flow effects as a result of EPU operation on plant structures, systems, and components (including verifying the continued structural integrity of the replacement steam dryer (RSD)). License condition 2.C(15) was added to the facility operating license for each unit, as part of the EPU amendment, to provide the necessary requirements associated with potential adverse flow effects. This license

condition requires, in part, that the licensee benchmark the RSD stress analysis methodology using data collected at or near 3514 MWt. This benchmarking effort establishes the PBAPS Unit 2 RSD strain limits that will be used as acceptance criteria for power ascension above 3514 MWt. The license condition also requires that the methodology for establishing the RSD strain limits not be made less restrictive without prior NRC approval.

Exelon implemented the EPU during the fall 2014 refueling outage for PBAPS Unit 2. Since about mid-December 2014, PBAPS Unit 2 has been holding at about 3514 MWt (89% of the current licensed power level of 3951 MWt, or 100% of the pre-EPU license power level) as part of the RSD benchmarking effort. As described in Exelon's letter dated February 3, 2015, RSD strain gauge measurements, collected near 3514 MWt, identified strain responses in the low frequency range that were not previously predicted. As a result, the licensee developed an approach to quantify the magnitude of the unpredicted loads and integrate the results into the original methodology. In accordance with PBAPS Unit 2 license condition 2.C(15)(d)3, Exelon's letter requested NRC approval for this revision to the methodology for establishing the RSD strain limits.

During review of the revision to the methodology the NRC staff requested additional information from Exelon. The request for additional information (RAI) contained 10 questions. Exelon provided supplemental information in a letter dated March 24, 2015, to respond to the first 9 questions. The focus of the meeting was to discuss the remaining open items as delineated in the remaining RAI question.

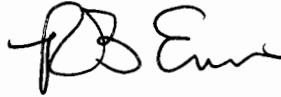
#### Meeting Discussion

Exelon presented information intended to demonstrate that the analysis, using the revised methodology, shows that the RSD will perform acceptably at full EPU conditions. The licensee provided details to justify why the approach should be considered acceptable. The discussion included a number of reasons why the approach is conservative.

The NRC staff discussed concerns regarding the revised methodology. Specifically, the staff considers that the technical approach involves approximations which need further validation. As such, the staff had requested additional information to request the licensee to use a revised approach to better estimate the stresses at full EPU conditions. The licensee indicated it would take several weeks to respond to this request.

The NRC staff made no decision during the meeting regarding the acceptability of the methodology. However, the staff said it would consider allowing PBAPS Unit 2 to continue power ascension to 104% of 3514 MWt, based on the conservatism in the methodology. The staff indicated that a response to the remaining request for additional information question was needed. The NRC staff stated it would let Exelon know by March 30, 2015, of its decision on further power ascension.

Please direct any inquiries to me at 301-415-1420, or Rick.Ennis@nrc.gov.

A handwritten signature in black ink, appearing to read "R B Ennis". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

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

Docket No. 50-277

Enclosure:  
List of Attendees

cc w/encl: Distribution via Listserv

LIST OF ATTENDEES

MARCH 26, 2015, CLOSED MEETING WITH EXELON GENERATION COMPANY, LLC

PEACH BOTTOM ATOMIC POWER STATION, UNIT 2

STEAM DRYER ANALYSIS

<b>Name</b>	<b>Organization</b>
Rick Ennis	NRC
Mike Breach	NRC
Kamal Manoly	NRC
YLi	NRC
JLubinski	NRC
JUhle	NRC
John Rommel	Exelon
Ken Ainger	Exelon
Scot Greenlee	Exelon
David Neff	Exelon
Ron Janowiak	Exelon
Dave Helker	Exelon
Mike Massaro	Exelon
Paul Rau	Exelon
Stephen Minnick	Exelon
Karen Fujikawa	Westinghouse
Leslie Wellstein	Westinghouse
Gregory Meyer	Westinghouse
Terry Rudek	Westinghouse
Jim Brennan	Westinghouse
Thomas Carter	Westinghouse
Robert Mercer	Westinghouse
David Suddaby	Westinghouse
Steve Hambric	NRC Contractor - Penn State
Vik Shah	NRC Contractor - Argonne National Laboratory
Samir Ziada	NRC Contractor - McMaster University
Fred Bower*	NRC
Sam Hansell*	NRC
Brad Fuller*	PA Department of Environmental Protection

\* via telephone

Enclosure

Please direct any inquiries to me at 301-415-1420, or Rick.Ennis@nrc.gov.

**/RA/**

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

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**ADAMS Accession No: ML15091A134**

OFFICE	LPL1-2/PM	LPL1-2/LA	EMCB/BC(A)	DE/SLA	LPL1-2/BC	LPL1-2/PM
NAME	REnnis	ABaxter	YLi	KManoly	DBroaddus	REnnis
DATE	04/01/2015	04/15/2015	04/15/2015	04/15/2015	04/16/2015	04/16/2015

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