



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

June 25, 2021

**LICENSEE:** Exelon Generation Company, LLC

**FACILITY:** CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2

**SUBJECT:** SUMMARY OF MAY 24, 2021, PRE-APPLICATION MEETING WITH EXELON GENERATION COMPANY, LLC ON PLANNED SUBMITTAL OF LICENSE AMENDMENT REQUEST FOR CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2, CONCERNING SPENT FUEL POOL COOLING DESIGN BASIS CHANGE (L-2021-LRM-0051)

On May 24, 2021, an observation public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Exelon Generation Company, LLC (Exelon, the licensee). The purpose of this meeting was for Exelon to provide an overview of its planned license amendment request (LAR) for the Calvert Cliffs Nuclear Power Plant, Units 1 and 2 (Calvert Cliffs), to change the design basis for spent fuel pool (SFP) cooling with a full reactor core offload. The meeting notice and agenda, dated May 13, 2021, are available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML21144A024. The presentation material used by the licensee is available in ADAMS at Accession No. ML21144A017. A list of attendees is enclosed.

The Exelon representatives stated that in addition to requesting NRC's approval of the design basis change, it would be requesting approval of changes to the decay time section of the Calvert Cliffs Technical Requirements Manual. The proposed design basis change is to no longer require use of shutdown cooling system to support SFP cooling for heat removal when a full reactor core has been off loaded to the SFP. In its presentation, the licensee discussed that the proposed change would result in the SFP temperature rising above the current limit of 130 degrees Fahrenheit (°F) to a maximum of 150 °F.

The Exelon representatives described the regulatory requirements and guidance that they believe were applicable to the proposed change. The licensee identified variations from regulatory guidance that would be included in the proposed LAR and talked about the analyses that would be relied on to support the proposed change that would be described in the proposed LAR. The licensee stated the proposed LAR would have similarities to two previous amendment approvals for Turkey Point (ADAMS Accession No. ML0306207460) and Calvert Cliffs (ADAMS Accession No. ML003773029). The licensee stated that it plans to rely on the existing analysis and methods to demonstrate the proposed change meets applicable regulatory requirements.

The Exelon representatives stated that the licensee would submit the proposed LAR by June 15, 2021, and request that the NRC staff complete the review of the request within six months of the date of submittal.

The NRC staff informed the licensee that in addition to the information discussed during its presentation, the planned LAR needs to include the following:

- In the proposed LAR, the licensee needs to address that under the possible loss of both trains of SFP cooling, the pool temperature will not exceed 150 °F and the time it will take to reach 150 °F and the time to reaching boiling point temperature. The time to reach boiling temperature is important because it indicates how much time the licensee to put in place alternate cooling methods.
- In the proposed LAR, the licensee needs to address the maximum or worst-case heat load in the fuel pool and using the maximum service water temperature or maximum ultimate heat sink temperature.
- In the proposed LAR, the licensee needs to identify all the make-up water sources and identify which ones are safety-related.
- In the proposed LAR, the licensee needs to address the impact of the higher temperature on the SFP structure.
- In the proposed LAR, the licensee needs to state the decay heat standard along with the margin used in the fuel pool cooling analysis.

The NRC staff informed the licensee that it would be helpful if the LAR included the following:

- In the proposed LAR, it would be helpful if the licensee identified the principal design criteria for Calvert Cliffs in addition to the general design criteria (GDC) in the proposed LAR. During the meeting Exelon identified the GDC that the proposed change would be consistent, however Calvert Cliffs 1 and 2 are non-GDC plants.

Members of the public were in attendance. NRC staff did receive questions from members of the public. The NRC staff were asked the following two questions<sup>1</sup>:

- Is the main change a change to the time of decay heat?
- If the licensee increases the limit for the spent fuel temperature to 150 °F and the structure of the pool was qualified for 150 °F, would the proposed change zero out the margin for the SFP?

In response to the first question, the NRC staff stated that the SFP should be kept below 150 °F and no boiling should occur in the pool. The NRC staff did not provide a response to the second question during the meeting.

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<sup>1</sup> The questions are not verbatim as stated by the person asking the question.

No Public Meeting Feedback forms were received. No regulatory decisions were made during the public meeting. Please direct any inquiries to me at (301) 415-2871 or [Michael.Marshall@nrc.gov](mailto:Michael.Marshall@nrc.gov).

Sincerely,

**/RA/**

Michael L. Marshall, Jr., Senior Project Manager  
Plant Licensing Branch I  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-317 and 50-318

Enclosure:  
List of Attendees

cc: Listserv

LIST OF ATTENDEES

May 24, 2021, PRE-APPLICATION MEETING WITH EXELON GENERATION COMPANY, LLC  
ON PLANNED SUBMITTAL OF LICENSING ACTIONS FOR CALVERT CLIFFS NUCLEAR  
POWER PLANT, UNITS 1 AND 2, CONCERNING  
SPENT FUEL POOL COOLING DESIGN BASIS CHANGE

Name	Organization
John Ma	U.S. Nuclear Regulatory Commission (NRC)
Michael Marshall	NRC
Sean Meighan	NRC
Sarah Obadina	NRC
John Parillo	NRC
Ahsan Sallman	NRC
Neil Sheehan	NRC
Henry Wagage	NRC
Kurt Bodine	Exelon Generation Company, LLC (Exelon)
Cecilie Broussard	Exelon
Ken Greene	Exelon
David Helker	Exelon
Christopher Jackson	Exelon
Christopher Junge	Exelon
Francis Mascitelli	Exelon
John Massari	Exelon
Larry Smith	Exelon
Chukai Yin	Exelon
Janna Jackson	---
Edwin Lyman	---
Shawn Seaman	---

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ASallman, NRR

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**ADAMS Accession Nos.:**

**ML21133A291 (Meeting Notice);**

**ML21161A108 (Summary);**

**ML21144A017 (Handouts)**

OFFICE	NRR/DORL/LPL1/PM	NRR/DORL/LPL1/LAiT	NRR/DORL/LPL1/BC
NAME	MMarshall	KEntz	JDanna
DATE	06/10/2021	06/10/2021	06/24/2021
OFFICE	NRR/DORL/LPL1/PM		
NAME	MMarshall		
DATE	06/25/2021		

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