



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

June 11, 2021

LICENSEE: Dominion Energy Virginia

FACILITY: Surry, Units 1 and 2

SUBJECT: SURREY UNITS 1 AND 2 - MAY 13, 2021, SUMMARY REGARDING  
PRE-APPLICATION MEETING TO DISCUSS PLANNED LICENSE  
AMENDMENT REQUESTS

On May 13, 2021, an Observation Meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Dominion Energy Virginia (Dominion Energy, the licensee). The purpose of the meeting was for Dominion Energy to provide planned amendments for Surry Power Station, Units 1 and 2. The planned amendments would increase the maximum Uranium enrichment from 4.3 to 5 weight percent U<sup>235</sup>. Increasing the maximum uranium enrichment necessitates modifying the New Fuel Storage Area (NFSA) and spent fuel pool (SFP) criticality analysis storage requirements. The meeting notice and agenda dated April 30, 2021, are available in Agencywide Documents Access and Management System (ADAMS) at Accession No. ML21131A113. The licensee's presentation is available in ADAMS at Accession No. ML21127A136. A list of participants is provided as Enclosure 1.

The licensee discussed the current SFP and NFSA configurations and storage requirements including the SFP boron concentration and credit for accident analysis. The licensee proposes to change the SFP configuration by increase the maximum Uranium enrichment from 4.3 to 5 weight percent U<sup>235</sup>, update the criticality analysis, add soluble boron credit for normal and accident conditions, add gadolinium burnable absorber into the licensing basis, and increase the identified analysis margin. For the NFSA, the current storage current enrichment limit is 4.3 weight percent U<sup>235</sup>, no empty cells are required and burnable absorbers are not credited. The proposed change would increase the maximum enrichment to 5 weight percent U<sup>235</sup>, include two storage configuration options, update the criticality analysis, and increase the identified analysis margin.

The licensee also discussed its criticality analysis method for the proposed changes of the new and SFP configurations and stated that the analysis method would be consistent with Regulatory Guide, 1.240, "Fresh and Spent Fuel Pool Criticality Analyses." The licensee plans to modify its analysis methods to incorporate soluble boron credit; identifies sources and flow rates and volumes; discuss means of detection and mitigation; starting and ending soluble boron conservatively bounded by the criticality analysis boron. The NRC staff asked questions regarding the scope of soluble boron credit. The licensee stated that the scope of the soluble boron credit will be provided in the license amendment request.

The licensee also presented its cask drop accident analysis approach for the spent fuel pool. The NRC staff questioned whether the dropped cask would damage fuel, have any potential reactivity effects, and/or the impact of the cask drop accident analysis concerning the SFP liner.

The NRC staff suggested the LAR provide analysis concerning these possible impacts. The NRC staff asked how the fuel handling accident may change. The licensee stated that it would submit the results of its revised fuel handling accident analysis for the changes.

The licensee plans to submit its license amendment request by the end of third quarter of calendar year (CY) 2021 and request approval in the first quarter of CY 2023. The NRC staff stated that SFP criticality amendments are complex and noted that most have been completed in about 18 months.

No members of the public were in attendance. No regulatory decisions were made in the meeting.

Please direct any inquiries to me at 301-415-5897 or [Vaughn.Thomas@nrc.gov](mailto:Vaughn.Thomas@nrc.gov).

*/RA/*

Vaughn Thomas, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos.: 50-280 and 50-281

Enclosure:  
List of Attendees

cc: Listserv

**ENCLOSURE**

**LIST OF ATTENDEES**

LIST OF PARTICIPANTS  
MAY 13, 2021 PRE-APPLICATION PUBLIC CONFERENCE CALL  
WITH  
DOMINION ENERGY VIRGINIA  
PROPOSED LICENSED AMENDMENT REQUEST FOR THE  
NEW AND SPENT FUEL POOL CRITICALITY ANALYSES

<b>Name</b>	<b>Organization</b>
Vaughn Thomas	U.S. Nuclear Regulatory Commission
Kent Wood	U.S. Nuclear Regulatory Commission
Clinton Ashley	U.S. Nuclear Regulatory Commission
Matthew Yoder	U.S. Nuclear Regulatory Commission
Lydiana Guilloty	U.S. Nuclear Regulatory Commission
Steve Jones	U.S. Nuclear Regulatory Commission
Christian Scott	U.S. Nuclear Regulatory Commission
Brian Wittick	U.S. Nuclear Regulatory Commission
Michael Markley	U.S. Nuclear Regulatory Commission
Gary D. Miller	Dominion Energy Virginia
Kasey Kennett	Dominion Energy Virginia
Rebecca Fawls	Dominion Energy Virginia
David Livingston	Dominion Energy Virginia
James Stanley	Dominion Energy Virginia
Daniel Smith	Dominion Energy Virginia
Robert Brackmann	Dominion Energy Virginia

SUBJECT: SURRY UNITS 1 AND 2 - MAY 13, 2021, SUMMARY REGARDING  
PRE-APPLICATION MEETING TO DISCUSS PLANNED LICENSE  
AMENDMENT REQUESTS DATED JUNE 11, 2021

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**ADAMS Accession No.: ML21155A163**

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DATE	06/04/2021	06/08/2021	06/11/2021
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