

From: Ed Miller
Sent: Tuesday, June 20, 2023 1:14 PM
To: Shayan.Sinha@dominionenergy.com
Subject: RAI for Review of Appendix F to DOM-NAF-2-P (Redacted)
Attachments: Formal RAI for VIPRE Code Appendix F Review R1_REDACTED VERSION.pdf

Shayan,

By letter dated December 19, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22353A619 (Proprietary, Non-Public) ML22353A620 (Public)) Dominion Energy submitted to the U.S. Nuclear Regulatory Commission (NRC) a request for review and approval of Appendix F to Fleet Report DOM-NAF-2-P. The appendix addresses qualification of the Framatome ORFEO-GAIA and ORFEO-NMGRID CHF Correlations in the Dominion Energy VIPRE-D Computer Code. The request for review was supplemented by letter dated April 6, 2023 (ADAMS Accession No. ML23096A297 (Proprietary, Non-Public) ML23096A298 (Public)).

The NRC staff has reviewed the information submitted and needs additional information to complete its review of the fleet report appendix. These requests for additional (RAIs) are attached to this email and are released formally with a 45-day response period (August 4, 2023).

The attached RAI has been redacted and this email, along with its attachment, will be placed in ADAMS and profiled as Public.

Ed Miller
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Hearing Identifier: NRR_DRMA
Email Number: 2133

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Subject: RAI for Review of Appendix F to DOM-NAF-2-P (Redacted)
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From: Ed Miller

Created By: Ed.Miller@nrc.gov

Recipients:
"Shayan.Sinha@dominionenergy.com" <Shayan.Sinha@dominionenergy.com>
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Options
Priority: Normal
Return Notification: No
Reply Requested: No
Sensitivity: Normal
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REQUEST FOR ADDITIONAL INFORMATION
BY THE OFFICE OF NUCLEAR REACTOR REGULATION
APPENDIX F TO FLEET REPORT DOM-NAF-2-P
VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
SURRY POWER STATION UNITS 1 AND 2
MILLSTONE POWER STATION UNITS 2 AND 3
EPID: L-2022-LLT-0003

By letter dated December 19, 2022, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22353A620), Dominion Energy (the licensee) submitted a request for review and approval of Appendix F to Fleet Report DOM-NAF-2-P, "Qualification of the Framatome ORFEO-GAIA and ORFEO-NMGRID Correlation in the Dominion Energy VIPRE-D Computer Code" to the U.S. Nuclear Regulatory Commission (NRC) for review and approval. The purpose of this report was to describe the qualification of the Framatome ORFEO-GAIA and ORFEO-NMGRID Critical Heat Flux (CHF) correlations with the VIPRE-D code. The ORFEO-GAIA CHF model is applicable to fuel assemblies that are equipped with GAIA grids, with or without IGM grids. The ORFEO-NMGRID CHF model is applicable to fuel assemblies that are equipped with non-mixing grids.

By email dated March 8, 2023 (ADAMS Accession No. ML23067A216), the NRC requested additional information (RAI) for the relevant data that was used to perform the validation of the Framatome ORFEO-GAIA and ORFEO-NMGRID Critical Heat Flux (CHF) correlations to facilitate their review.

Upon review of the licensee request and the subsequent validation data provided by the licensee April 6, 2023 (ADAMS Accession No. ML23096A298), the NRC has determined that the following additional information is necessary to complete its review and make a regulatory decision:

1. A plot of pressure versus M/P for ORFEO-GAIA and ORFEO-NMGRID data revealed [[REDACTED]]. Further investigation of the validation data provided by the licensee revealed the following potential [[REDACTED]]:

For ORFEO-GAIA – [[REDACTED]]

For ORFEO-NMGRID – [[REDACTED]]

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2. Confirm that the numerical solution methods and the empirical correlations used in the VIPRE-D model for the validation performed for ORFEO-GAIA and ORFEO-NMGRID data are consistent with the approved values in the topical report for the VIPRE-D code.