

**VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261**

July 31, 2018

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Serial No.: 18-249
SPS/LIC-CGL: R0
Docket Nos.: 50-280
50-281
License Nos.: DPR-32
DPR-37

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
PROPOSED LICENSE AMENDMENT REQUEST
REVISION OF ANALYTICAL METHODOLOGY REFERENCE
IN CORE OPERATING LIMITS REPORT
FOR SMALL BREAK LOSS OF COOLANT ACCIDENT

Pursuant to 10CFR50.90, Virginia Electric and Power Company (Dominion Energy Virginia) is submitting a license amendment request (LAR) to revise the Technical Specifications for Surry Power Station Units 1 and 2. The proposed LAR replaces the current Small Break Loss of Coolant Accident (SBLOCA) methodologies contained in the Technical Specification (TS) list of NRC approved methodologies for determining core operating limits with a new SBLOCA methodology. Specifically, the proposed LAR adds the Framatome Topical Report EMF-2328(P)(A), "PWR Small Break LOCA Evaluation Model S-RELAP5 Based," as supplemented by ANP-3676P, "Surry Fuel-Vendor Independent Small Break LOCA Analysis," to the list of methodologies approved for reference in the Core Operating Limits Report (COLR) in TS 6.2.C. This reference replaces the current Westinghouse SBLOCA methodologies in TS 6.2.C.

Attachment 1 provides discussion and evaluation of the proposed change. The marked-up and proposed pages for the TS are provided in Attachments 2 and 3, respectively. Attachments 4 and 5 provide the proprietary version of ANP-3676P and the non-proprietary version (ANP-3676NP), respectively.

Since Attachment 4 contains information proprietary to Framatome, it is supported by an affidavit signed by the owner of the information. The affidavit, which is provided in Attachment 6, sets forth the bases by which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10CFR2.390 of the Commission's regulations. Accordingly, it is respectfully requested that the information, which is proprietary to Framatome, be withheld from public disclosure in accordance with 10CFR2.390 of the Commission's regulations. In conformance to the requirements of 10CFR2.390 concerning the protection of proprietary information, the proprietary information included in

ATTACHMENT 4 CONTAINS PROPRIETARY INFORMATION THAT IS BEING WITHHELD FROM PUBLIC
DISCLOSURE UNDER 10 CFR 2.390.
UPON SEPARATION OF ATTACHMENT 4, THIS LETTER IS DECONTROLLED.

ADD
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Attachment 4 is contained within brackets. The non-proprietary version of the report is provided in Attachment 5, in which the bracketed information has been withheld.

We have evaluated the proposed amendment and have determined that it does not involve a significant hazards consideration as defined in 10CFR50.92. The basis for this determination is included in Attachment 1. We have also determined that operation with the proposed change will not result in any significant increase in the amount of effluents that may be released offsite or any significant increase in individual or cumulative occupational radiation exposure. Therefore, the proposed amendment is eligible for categorical exclusion from an environmental assessment as set forth in 10CFR51.22(c)(9). Pursuant to 10CFR51.22(b), no environmental impact statement or environmental assessment is needed in connection with the approval of the proposed change. The proposed TS change has been reviewed and approved by the Facility Safety Review Committee.

Dominion Energy Virginia requests approval of the proposed change by January 31, 2020 with a 90-day implementation period.

Should you have any questions or require additional information, please contact Mr. Gary D. Miller at (804) 273-2771.

Respectfully,



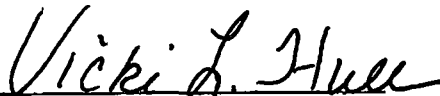
Mark D. Sartain
Vice President – Nuclear Engineering and Fleet Support

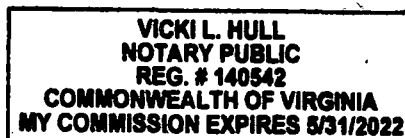
COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Mr. Mark D. Sartain, who is Vice President – Nuclear Engineering and Fleet Support, of Virginia Electric and Power Company. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of that company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 31st day of July, 2018.

My Commission Expires: 5-31-22


Notary Public



Commitments contained in this letter: None

Attachments:

1. Discussion of Technical Specifications Change
2. Marked-up Technical Specifications Page
3. Proposed Technical Specifications Page
4. ANP-3676P, Revision 0, Surry Fuel-Vendor Independent Small Break LOCA Analysis Licensing Report (Proprietary)
5. ANP-3676NP, Revision 0, Surry Fuel-Vendor Independent Small Break LOCA Analysis Licensing Report (Non-Proprietary)
6. Framatome Application for Withholding and Affidavit

cc: U.S. Nuclear Regulatory Commission - Region II
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NRC Senior Resident Inspector
Surry Power Station

Attachment 1

Discussion of Technical Specifications Change

**Virginia Electric and Power Company
(Dominion Energy Virginia)
Surry Power Station Units 1 and 2**

DISCUSSION OF TECHNICAL SPECIFICATIONS CHANGE

1.0 SUMMARY DESCRIPTION

Virginia Electric and Power Company (Dominion Energy Virginia) proposes this license amendment request (LAR) to Facility Operating License Numbers DRP-32 and DRP-37 for Surry Power Station Units 1 and 2, respectively. The proposed Technical Specification (TS) change adds Framatome Topical Report EMF-2328(P)(A), "PWR Small Break LOCA Evaluation Model, S-RELAP5 Based," (Reference 1), as supplemented by the Surry-specific application report ANP-3676P, to the list of methodologies approved for reference in the Core Operating Limits Report (COLR) in Technical Specification 6.2.C. Framatome Topical Report EMF-2328(P)(A), as supplemented by the Surry-specific application report, replaces two existing COLR references for the current Westinghouse Small Break (SB) LOCA Evaluation Model (EM). The added reference identifies the analytical methods used to determine core operating limits for the SBLOCA event described in the Surry Power Station Updated Final Safety Analysis Report (UFSAR), Section 14.5.2.

The proposed LAR has been reviewed, and it has been determined that no significant hazards consideration exists as defined in 10CFR50.92. In addition, it has been determined that the change qualifies for categorical exclusion from an environmental assessment as set forth in 10CFR51.22(c)(9); therefore, no environmental impact statement or environmental assessment is needed in connection with the approval of the proposed TS change.

2.0 DETAILED DESCRIPTION

2.1 System Design and Operation

The design requirements of existing plant systems, structures, and components (SSCs) are used as inputs to the SBLOCA analysis, with appropriate technical conservatisms applied pursuant to 10CFR50 Appendix K. Therefore, the SBLOCA analysis does not directly impact the existing design or configuration of any plant SSCs.

2.2 Current Technical Specification Requirements

TS 6.2.C directs that core operating limits shall be established prior to each reload cycle and contains references to the approved analytical methods that are used to determine the core operating limits. The current method listed for SBLOCA is the Westinghouse NOTRUMP EM identified as References 3 and 4 of TS 6.2.C.

2.3 Reason for the Proposed Change

The reason for the proposed change is to add the Framatome Fuel-Vendor Independent SBLOCA (FVI-SBLOCA) EM for Surry Units 1 and 2 (Attachment 4) to the TS 6.2.C references list as the methodology used to demonstrate compliance with the requirements of 10CFR50.46 and 10CFR50 Appendix K.

The current Surry SBLOCA analysis that uses the Westinghouse NOTRUMP EM (References 3 and 4) shows low margin to the Emergency Core Cooling System (ECCS) performance criteria of 10CFR50.46(b)(1-3) and could be challenging for the proposed 10CFR50.46(c) rule (Reference 5). The Framatome SBLOCA EM using S-RELAP5 provides additional margin to the current and proposed 10CFR50.46 ECCS performance criteria. Supplement 1 of Framatome Topical Report EMF-2328(P)(A), "PWR Small Break LOCA Evaluation Model, S-RELAP5 Based," includes a sample problem for a Westinghouse 3-loop Nuclear Steam Supply System (NSSS). The Surry analysis compares well, with respect to transient behavior and analytical results, to the sample analysis that was reviewed and approved by the NRC as part of the submittal package. The improvement in results with the S-RELAP5 methodology relative to the NOTRUMP methodology is consistent with previous evaluations such as that for North Anna Power Station, which is documented in the 2014 Annual Report of ECCS Model Changes (Reference 10).

Dominion Energy Virginia has developed a process to evaluate other fuel design and cladding material properties with respect to the applicability of the FVI-SBLOCA analyses. When validated by this process, the impact of fuel product changes on the SBLOCA analysis is assessed and evaluated for reportability under 10CFR50.46. Dominion Energy Virginia procedures for 10CFR50.46 reporting are consistent with NRC Regulatory Issue Summary 2016-04 (Reference 6). Specifically, a fuel product change would be evaluated as a change to the ECCS EM and evaluated for reportability pursuant to 10CFR50.46.

2.4 Description of Proposed Change

TS 6.2.C is revised to delete two COLR references for the Westinghouse SBLOCA EM and include a new reference for the Framatome FVI-SBLOCA EM. The proposed reference supports core operating limits for TS 3.12.B.1 and TS 3.12.B.2, Power Distribution Limits, listed under TS 6.2.C.3.

The following references will be deleted from TS 6.2.C (References 3 and 4):

3. WCAP-10054-P-A, "Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code."
4. WCAP-10079-P-A, "NOTRUMP, A Nodal Transient Small Break and General Network Code."

The following reference will be added to TS 6.2.C (Reference 3):

3. EMF-2328(P)(A), "PWR Small Break LOCA Evaluation Model, S-RELAP5 Based," as supplemented by ANP-3676P, "Surry Fuel-Vendor Independent Small Break LOCA Analysis."

TS 6.2.C References 5 through 10 are renumbered as 4 through 9.

The mark-up of TS 6.2.C, reflecting the proposed changes, is provided in Attachment 2. The typed page reflecting the proposed TS changes is provided in Attachment 3.

3.0 TECHNICAL EVALUATION

Attachment 4 provides a description of the Surry Units 1 and 2 SBLOCA analysis. This analysis was performed in accordance with the NRC-approved S-RELAP5 methodology in Framatome Topical Report EMF-2328(P)(A) and Supplement 1(P)(A) (References 1 and 2), which incorporates the appropriate conservatism prescribed by 10CFR50, Appendix K. The application of this Topical Report to Surry includes one deviation that is discussed in Section 3.2.3 of Attachment 4.

In addition to employing the methodology of EMF-2328(P)(A), there are two notable changes between the existing Westinghouse SBLOCA analysis documented in the UFSAR (Section 14.5.2 and Table 14.5-12) and the Framatome FVI-SBLOCA analysis (as described in Attachment 4):

- Surry Units 1 and 2 currently use the Westinghouse 15x15 Upgrade Fuel design with Optimized ZIRLO™ cladding, which was evaluated as a change under 10CFR50.46 against the current Westinghouse SBLOCA analysis. The current Westinghouse SBLOCA analysis models the Surry Improved Fuel design with ZIRLO™ cladding. The Framatome FVI-SBLOCA analysis was performed using representative fuel design and material characteristics.
- In the current SBLOCA analysis, the High Head Safety Injection (HHSI) minimum flow rates assumed operator action to close the pump mini-recirculation valves within a certain time to increase flow to the Reactor Coolant System (RCS) cold legs. The Framatome FVI-SBLOCA analysis includes HHSI minimum flow rates that assume these valves remain open throughout the event. The Surry Emergency Operating Procedures will continue to include a step to close the valves during a LOCA to maximize HHSI pump flow to the RCS cold legs. However, after implementation of the new SBLOCA analysis, this operator action is no longer credited for the SBLOCA event.

The results presented in Attachments 4 and 5 satisfy the acceptance criteria specified in 10CFR50.46. The calculated peak clad temperature is less than the 2200°F limit, and the maximum transient local metal water reaction is less than the embrittlement limit of 17%. An assessment of the maximum total oxidation (pre-transient plus transient) was performed and remained below 17% throughout the life of the fuel. In addition, the total core wide zirconium water reaction is less than the 1% limit. To summarize, the analytical results satisfy the ECCS performance acceptance criteria of 10CFR50.46(b)(1-3).

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements and Criteria

The Small Break Loss of Coolant Accident (SBLOCA) analysis satisfies all requirements of 10CFR50.46(b)(1-3) and 10CFR50 Appendix K, when considered in conjunction with the established Surry Units 1 and 2 pre-transient oxidation limits. The proposed change meets the current regulatory requirements and does not affect conformance with the General Design Criterion as described in the Surry Units 1 and 2 UFSAR.

4.2 Precedent

Framatome's Supplement 1 to EMF-2328(P)(A) was approved by the NRC in September 2015 (Reference 2). Dominion Energy Nuclear Connecticut, Inc., submitted a LAR for Millstone Power Station Unit 2 to incorporate an updated SBLOCA analysis using the EMF-2328(P)(A) Supplement 1 methodology into plant TS 6.9.1.8.b (References 7 and 8). The associated license amendment was issued by the NRC in September 2016 (Reference 9).

4.3 No Significant Hazards Consideration Determination Analysis

The proposed change to Technical Specification (TS) 6.2.C adds Framatome Topical Report EMF-2328(P)(A) and its Surry-specific application report ANP-3676P to the list of approved methodologies for use in determining core operating limits.

Dominion Energy Virginia has evaluated whether a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10CFR50.92, "Issuance of amendment," as discussed below:

- 1) Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?**

Response: No.

The proposed change to TS 6.2.C permits the use of an NRC-approved methodology for analysis of the Small Break Loss of Coolant Accident (SBLOCA) to determine if Surry Power Station (Surry) Units 1 and 2 continue to meet the applicable design and safety analysis acceptance criteria. The proposed change to the list of NRC-approved methodologies in TS 6.2.C has no direct impact upon plant operation or configuration. The list of methodologies in TS 6.2.C does not impact either the initiation of an accident or the mitigation of its consequences.

The results of the revised SBLOCA transient analysis and existing pre-transient oxidation limits demonstrate that Surry Units 1 and 2 continue to satisfy the 10CFR50.46(b)(1-3) Emergency Core Cooling System performance acceptance criteria using an NRC-approved evaluation model.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2) Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change will not create the possibility of a new or different accident due to credible new failure mechanisms, malfunctions, or accident initiators not previously considered. There is no change to the parameters within which the plant is normally operated and no physical plant modifications are being made; thus, the possibility of a new or different type of accident is not created.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3) Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

No design basis or safety limits are exceeded or altered by this change. Approved methodologies have been used to ensure that the plant continues to meet applicable design criteria and safety analysis acceptance criteria.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, Dominion Energy Virginia concludes that the proposed change does not involve a significant hazards consideration under the standards set forth in

10CFR50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

4.4 Conclusion

Implementation of the proposed license amendment is safe and will have no effect on plant operation. The proposed change will make no physical modifications to equipment or how equipment is operated or maintained.

Based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 ENVIRONMENTAL CONSIDERATION

Dominion Energy Virginia has reviewed the proposed license amendment for environmental considerations in accordance with 10CFR51.22. As the proposed license amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released onsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure, the categorical exclusion criteria of 10CFR51.22(c)(9) are met. Therefore, pursuant to 10CFR51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 REFERENCES

1. Framatome Topical Report EMF-2328(P)(A) Revision 0, "PWR Small Break LOCA Evaluation Model, S-RELAP5 Based," March 2001. (Accession No. ML011410383)
2. Framatome Topical Report EMF-2328(P)(A) Revision 0, Supplement 1(P)(A) Revision 0, "PWR Small Break LOCA Evaluation Model, S-RELAP5 Based," September 2015. (Accession No. ML12065A390)
3. WCAP-10054-P-A, "Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code."
4. WCAP-10079-P-A, "NOTRUMP, A Nodal Transient Small Break and General Network Code."

5. Staff Requirements Memorandum SECY-16-0033, "Draft Final Rule – Performance-Based Emergency Core Cooling System Requirements and Related Fuel Cladding Acceptance Criteria (RIN 3150-AH42)," released date April 4, 2016. (Accession No. ML1523A947)
6. NRC Regulatory Issue Summary 2016-04, "Clarification of 10CFR50.46 Reporting Requirements and Recent Issues with Related Guidance not Approved for Use," April 19, 2016. (Accession No. ML15324A296)
7. Correspondence, Dominion Nuclear Connecticut, Inc., (Mark D. Sartain) to U.S. NRC (Document Control Desk), Serial No. 15-411, "Dominion Nuclear Connecticut, Inc., Millstone Power Station Unit 2, Proposed License Amendment Request, Small Break Loss of Coolant Accident Reanalysis," September 1, 2015. (Accession No. ML15253A205)
8. Correspondence, Dominion Nuclear Connecticut, Inc., (Mark D. Sartain) to U.S. NRC (Document Control Desk), Serial No. 16-070, "Dominion Nuclear Connecticut, Inc., Millstone Power Station Unit 2, Response to Request for Additional Information for Proposed License Amendment Request Regarding Small Break Loss of Coolant Accident Reanalysis (CAC NO. MF6700)," March 24, 2016. (Accession No. ML16096A388)
9. Correspondence, U.S. NRC (Richard V. Guzman) to Dominion Nuclear Connecticut, Inc., (David A. Heacock), "Millstone Power Station, Unit No. 2 – Issuance of Amendment Re: Small Break Loss of Coolant Accident Reanalysis (CAC NO. MF6700)," September 30, 2016. (Accession No. ML16249A001)
10. Correspondence, Dominion (Mark D. Sartain) to U.S. NRC (Document Control Desk), Serial No. 15-299, "Dominion Nuclear Connecticut, Inc., Virginia Electric and Power Company, Millstone Power Station Units 2 and 3, North Anna Power Station Units 1 and 2, Surry Power Station Units 1 and 2, 2014 Annual Report of Emergency Core Cooling System (ECCS) Model Changes Pursuant to the Requirements of 10CFR50.46," June 30, 2015. (Accession No. ML 15188A346)

Attachment 2

Marked-up Technical Specifications Page

**Virginia Electric and Power Company
(Dominion Energy Virginia)
Surry Power Station Units 1 and 2**

The analytical methods used to determine the core operating limits identified above shall be those previously reviewed and approved by the NRC, and identified below. The CORE OPERATING LIMITS REPORT will contain the complete identification for each of the TS referenced topical reports used to prepare the CORE OPERATING LIMITS REPORT (i.e., report number, title, revision, date, and any supplements). The core operating limits shall be determined so that applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, and transient and accident analysis limits) of the safety analysis are met. The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements thereto, shall be provided for information for each reload cycle to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

REFERENCES

1. VEP-FRD-42-A, "Reload Nuclear Design Methodology"
2. WCAP-16009-P-A, "Realistic Large Break LOCA Evaluation Methodology Using the Automated Statistical Treatment of Uncertainty Method (ASTRUM)," (Westinghouse Proprietary).
- ~~3. WCAP-10054-P-A, "Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code," (W Proprietary)~~
- ~~4. WCAP-10079-P-A, "NOTRUMP, A Nodal Transient Small Break and General Network Code," (W Proprietary)~~
4. → 5. WCAP-12610-P-A, "VANTAGE+ Fuel Assembly Report," (Westinghouse Proprietary)
5. → 6. VEP-NE-2-A, "Statistical DNBR Evaluation Methodology"
6. → 7. VEP-NE-3-A, "Qualification of the WRB-1 CHF Correlation in the Virginia Power COBRA Code"
7. → 8. DOM-NAF-2-A, "Reactor Core Thermal-Hydraulics Using the VIPRE-D Computer Code," including Appendix B, "Qualification of the Westinghouse WRB-1 CHF Correlation in the Dominion VIPRE-D Computer Code," and Appendix D, "Qualification of the ABB-NV and WLOP CHF Correlations in the Dominion VIPRE-D Computer Code"
8. → 9. WCAP-8745-P-A, "Design Bases for Thermal Overpower Delta-T and Thermal Overtemperature Delta-T Trip Function"
9. → 10. WCAP-12610-P-A and CENPD-404-P-A, Addendum 1-A, "Optimized ZIRLO," (Westinghouse Proprietary)

Attachment 3

Proposed Technical Specifications Page

**Virginia Electric and Power Company
(Dominion Energy Virginia)
Surry Power Station Units 1 and 2**

The analytical methods used to determine the core operating limits identified above shall be those previously reviewed and approved by the NRC, and identified below. The CORE OPERATING LIMITS REPORT will contain the complete identification for each of the TS referenced topical reports used to prepare the CORE OPERATING LIMITS REPORT (i.e., report number, title, revision, date, and any supplements). The core operating limits shall be determined so that applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, and transient and accident analysis limits) of the safety analysis are met. The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements thereto, shall be provided for information for each reload cycle to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

REFERENCES

1. VEP-FRD-42-A, "Reload Nuclear Design Methodology"
2. WCAP-16009-P-A, "Realistic Large Break LOCA Evaluation Methodology Using the Automated Statistical Treatment of Uncertainty Method (ASTRUM)," (Westinghouse Proprietary).
3. EMF-2328(P)(A), "PWR Small Break LOCA Evaluation Model S-RELAP5 Based," as supplemented by ANP-3676P, "Surry Fuel-Vendor Independent Small Break LOCA Analysis."
4. WCAP-12610-P-A, "VANTAGE+ Fuel Assembly Report," (Westinghouse Proprietary)
5. VEP-NE-2-A, "Statistical DNBR Evaluation Methodology"
6. VEP-NE-3-A, "Qualification of the WRB-1 CHF Correlation in the Virginia Power COBRA Code"
7. DOM-NAF-2-A, "Reactor Core Thermal-Hydraulics Using the VIPRE-D Computer Code," including Appendix B, "Qualification of the Westinghouse WRB-1 CHF Correlation in the Dominion VIPRE-D Computer Code," and Appendix D, "Qualification of the ABB-NV and WLOP CHF Correlations in the Dominion VIPRE-D Computer Code"
8. WCAP-8745-P-A, "Design Bases for Thermal Overpower Delta-T and Thermal Overtemperature Delta-T Trip Function"
9. WCAP-12610-P-A and CENPD-404-P-A, Addendum 1-A, "Optimized ZIRLO," (Westinghouse Proprietary)

Attachment 6

Framatome Application for Withholding and Affidavit

**Virginia Electric and Power Company
(Dominion Energy Virginia)
Surry Power Station Units 1 and 2**

5. This Document has been made available to the U.S. Nuclear Regulatory Commission in confidence with the request that the information contained in this Document be withheld from public disclosure. The request for withholding of proprietary information is made in

accordance with 10 CFR 2.390. The information for which withholding from disclosure is requested qualifies under 10 CFR 2.390(a)(4) "Trade secrets and commercial or financial information."

6. The following criteria are customarily applied by Framatome Inc. to determine whether information should be classified as proprietary:

- (a) The information reveals details of Framatome Inc.'s research and development plans and programs or their results.
- (b) Use of the information by a competitor would permit the competitor to significantly reduce its expenditures, in time or resources, to design, produce, or market a similar product or service.
- (c) The information includes test data or analytical techniques concerning a process, methodology, or component, the application of which results in a competitive advantage for Framatome Inc.
- (d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for Framatome Inc. in product optimization or marketability.
- (e) The information is vital to a competitive advantage held by Framatome Inc., would be helpful to competitors to Framatome Inc., and would likely cause substantial harm to the competitive position of Framatome Inc.

The information in this Document is considered proprietary for the reasons set forth in paragraphs 6(b), 6(d) and 6(e) above.

7. In accordance with Framatome Inc.'s policies governing the protection and control of information, proprietary information contained in this Document has been made available, on a limited basis, to others outside Framatome Inc. only as required and under suitable agreement providing for nondisclosure and limited use of the information.

8. Framatome Inc.'s policy requires that proprietary information be kept in a secured file or area and distributed on a need-to-know basis.

9. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

Philip A. Osol

SUBSCRIBED before me this 28th
day of June, 2018.

Heidi H Elder

Heidi Hamilton Elder
NOTARY PUBLIC, COMMONWEALTH OF VIRGINIA.
MY COMMISSION EXPIRES: 12/31/2022
Reg. # 7777873

