Attachment 2 of the Enclosure Contains Proprietary Information
Withhold from public disclosure under 10 CFR 2.390

NextEra ENERGY SEABROOK

September 10, 2013

10 CFR 2.390
10 CFR 50.90

SBK-L-13121
Docket No. 50-443

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Seabrook Station

License Amendment Request 13-05

Fixed Incore Detector System Analysis Methodology

In accordance with the provisions of Section 50.90 of Title 10 of the Code of Federal Regulations (10 CFR), NextEra Energy Seabrook, LLC (NextEra) is submitting License Amendment Request (LAR) 13-05 to revise the Seabrook Station Technical Specifications (TS). The proposed change revises TS 6.8.1.6.b, Core Operating Limits Report, by adding AREVA Licensing Report ANP-3243P, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA," which supplements and modifies the previously approved methodology in YAEC-1855PA, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis," October, 1992. The proposed change also modifies the surveillance requirements associated with the heat flux hot channel factor and nuclear enthalpy rise hot channel factor to include revised uncertainty values when measurement is obtained using the fixed incore detector system (FIDS). NextEra requests NRC approval of ANP-3243P, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA" and the TS changes, which are based on ANP-3243P.

The Enclosure to this letter provides NextEra's evaluation of the proposed change. Based on discussions with the NRC staff, the following clarifies the description of the probability and confidence levels that were used in the statistical treatment of the various uncertainty components that are described in Sections 6.1 and 6.2 of ANP-3243P, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA." A 95/95 criterion was used and the uncertainties were formulated as single-sided tolerance limits, so that the resulting uncertainties are conservatively bounding for 95% of the population, with a 95% probability. In actuality, the population size is always understated in determination of the confidence multipliers (k-factors), for conservatism.

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NRR

As discussed in the evaluation, the proposed change does not involve a significant hazards consideration pursuant to 10 CFR 50.92, and there are no significant environmental impacts associated with the change.

Attachment 1 to the enclosure provides markups of the TS pages showing the proposed change. Attachment 2 contains a proprietary version of ANP-3243P, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA," and provides the engineering analyses for the modification to the FIDS methodology. Attachment 4 contains ANP-3243NP, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA," which is a non-proprietary version of the report.

Attachment 2 of the Enclosure contains information proprietary to AREVA NP Inc. and is supported by an affidavit in Attachment 3 signed by AREVA, the owner of the information. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR 2.390. Accordingly, NextEra requests that the information proprietary to AREVA NP Inc. be withheld from public disclosure in accordance with 10 CFR 2.390.

Attachment 5 provides a markup of the TS Bases to show the proposed change. The changes to the TS Bases are provided for information only and will be implemented in accordance with TS 6.7.6.j, TS Bases Control Program, upon implementation of the license amendment.

No new commitments are made as a result of this change.

The Station Operation Review Committee has reviewed this LAR. A copy of this LAR has been forwarded to the designated New Hampshire state official pursuant to 10 CFR 50.91(b).

NextEra requests NRC review and approval of LAR 13-05 by May 1, 2014 and implementation within 60 days.

Should you have any questions regarding this letter, please contact Mr. Michael Ossing, Licensing Manager, at (603) 773-7512.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 9/10/2013

Sincerely,

Kevin T. Walsh
Site Vice President
NextEra Energy Seabrook, LLC

Enclosure

cc: NRC Region I Administrator
NRC Project Manager
NRC Senior Resident Inspector

Director Homeland Security and Emergency Management
New Hampshire Department of Safety
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ENCLOSURE

Evaluation of Proposed Change

Evaluation of Proposed Change

Subject: License Amendment Request 13-05, Fixed Incore Detector System Analysis Methodology

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ATTACHMENTS

1. Marked-up Technical Specification Pages
2. ANP-3243P, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA" (Proprietary)
3. AREVA Affidavit for Proprietary Report ANP-3243P
4. ANP-3243NP, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA" (Non-proprietary)
5. Marked-up Technical Specification Bases Page

1.0 Summary Description

This license amendment request (LAR) proposes to revise Technical Specification (TS) 6.8.1.6.b, Core Operating Limits Report, by adding AREVA Licensing Report ANP-3243P, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA [Reference 1]," which supplements and modifies the previously approved methodology in YAEC-1855PA, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis," October, 1992 [Reference 2]. The proposed change also modifies the surveillance requirements associated with the heat flux hot channel factor and nuclear enthalpy rise hot channel factor to include revised uncertainty values when measurement is obtained using the fixed incore detector system (FIDS). These changes provide enhancements to the original YAEC-1855PA methodology and allow for input changes necessary to accommodate the use of replacement fixed incore detectors. Specifically, these changes are:

- An improved prediction of the neutron component of the detector signal - Neutron Conversion Factor (NCF),
- Applying flexible correction factors to the measured detector signal of the replacement detectors to better assure normalization to a standard detector performance – Gamma Correction Factor (GCF), and
- Accounting and correcting the measured detector signal for detector depletion to better assure normalization to a standard detector performance – Depletion Correction factor (DPC).

ANP-3243P, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA," (Attachment 2) describes the detector performance trending analysis of 15 operating cycles, documents the proposed modifications to the FIDS analysis methodology, and provides a new determination of the resulting measurement uncertainty for the heat flux hot channel factor (F_Q) and the nuclear enthalpy rise hot channel factor ($F_{\Delta h}$) TS surveillance parameters.

ANP-3243P documents that these modifications yield results in surveillance parameters that compare well to the original methodology over the first 8 cycles. The report also documents that the results of the uncertainty analysis using all 15 completed cycles compared well to the results of the uncertainty analysis for the original YAEC-1855PA methodology. The report concludes that the revised FIDS analysis methodology remains comparable in accuracy and functionality to the original YAEC-1855PA methodology and the moveable incore detector system (MIDS).

2.0 Detailed Description

TS Changes - To provide a specific description of the proposed changes, the TS mark-ups are provided in Attachment 1. An item-by-item description of the TS changes is provided below along with a brief justification for each change. (Changes are shown below in ***bold italic***):

- TS 3/4.2.2 HEAT FLUX HOT CHANNEL FACTOR - $F_Q(Z)$

  The Surveillance Requirements (SR) are modified to revise the value of the $F_Q(Z)$ uncertainty to be applied when using the fixed incore detectors to account for measurement uncertainty.

  4.2.2.2 $F_Q(Z)$ shall be evaluated to determine if $F_Q(Z)$ is within its limits by:

  b. Increasing the measured $F_Q(Z)$ component of the power distribution map by 3% to account for manufacturing tolerances and further increasing the value by 5% when using the moveable incore detectors or 5.~~21~~***35***% when using the fixed incore detectors to account for measurement uncertainties.

  4.2.2.3 When $F_Q(Z)$ is measured for reasons other than meeting the requirements of Specification 4.2.2.2, an overall measured $F_Q(Z)$ shall be obtained from a power distribution map and increased by 3% to account for manufacturing tolerances and further increased by 5% when using the moveable incore detectors or 5.~~21~~***35***% when using the fixed incore detectors to account for measurement uncertainty.

  Justification: The fixed incore code (FINC) was modified to incorporate the revised FIDS analysis methodology and the proposed modifications were used to rerun all 15 cycles of flux maps. Following the uncertainty analysis methodology described in YAEC-1855PA, the results from the rerun of the 15 cycles of flux maps were used to determine the accuracy of the system. This change reflects the results of the analysis. The details of the analysis are presented in Attachment 2.

- TS 6.8.1.6.b.10 ADMINISTRATIVE CONTROLS; CORE OPERATING LIMITS REPORT

  This TS is revised to add AREVA Licensing Report ANP-3243P (Attachment 2) as a supplement to the currently approved YAEC-1855PA methodology.

  10. YAEC-1855PA, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis," October, 1992.

      ANP-3243P, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA," Revision 0, July 2013.

      Methodology for Specification:
      3.2.1 - AXIAL FLUX DIFFERENCE
      3.2.2 - Heat Flux Hot Channel Factor
      3.2.3 - Nuclear Enthalpy Rise Hot Channel Factor

  Justification: ANP-3243P demonstrates that the revised FIDS analysis methodology remains comparable in accuracy and functionality to the original YAEC-1855PA methodology and the MIDS.

The proposed changes to the TS are based on the analyses in ANP-3243P. Therefore, NextEra also requests approval of the methodology provided in Attachment 2.

While the supplement to the FIDS analysis methodology provides a new determination of the measurement uncertainties for the F_Q and $F_{\Delta h}$ TS surveillance parameters, only TS 3/4.2.2, Heat Flux Hot Channel Factor - $F_Q(Z)$, requires an accompanying change. The measurement uncertainty for $F_{\Delta h}$ is contained in the limit provided in the Core Operating Limits Report. The Bases change provided for information only in Attachment 5 contains the measurement uncertainties for the F_Q and $F_{\Delta h}$.

3.0 TECHNICAL EVALUATION

ANP-3243P provides modifications to the FIDS analysis methodology described in YAEC-1855PA. The FIDS Analysis methodology has been in use at Seabrook Station to monitor core power distribution surveillance parameters since Cycle 5 (1995). The FIDS uses fixed platinum detectors, which are predominately gamma sensitive and have a contribution from neutron capture. The FIDS detectors have operated successfully for over 20 years of operation. In 2007, Seabrook undertook a phased detector replacement project. The specification for the replacement detectors was designed to be a like-for-like replacement.

However, changes in manufacturing techniques required changes to the FIDS Analysis methodology to incorporate correction factors to normalize the replacement and the original detector signals to the standard detector performance required by the analysis methodology. Two replacement detector strings were installed in Cycle 14 (2009) and three detector strings were installed in Cycle 15 (2011). During Cycle 16 (2012), Seabrook undertook a program to trend detector performance over the 15 cycles of operation to determine appropriate modifications to FINC.

Based on the trending analysis, revisions were made to the FIDS analysis methodology. The modifications include a more precise method to determine the detector neutron conversion factor to better predict the neutron portion of the fixed detector signal based on the predicted neutron reaction rate. Modifications were also made to track detector exposure and to make a depletion correction to the measured signal based on the detector exposure. To normalize the replacement and original detectors, correction factors were quantified and incorporated as a multiplier on the measured signal of the replacement detectors.

The FINC was modified to incorporate the revised FIDS analysis methodology and the proposed modifications were used to rerun all 15 cycles of flux maps. Following the uncertainty analysis methodology described in YAEC-1855PA, the results from the rerun of the 15 cycles of flux maps were used to determine the accuracy of the system. From the analysis, changes were made to the integral and total detector processing components of the uncertainty. In addition, the detector reproducibility was analyzed over Cycles 14 to 16 and changes were made to the reproducibility component of the uncertainty analysis.

ANP-3243P describes the detector performance trending analysis of the 15 cycles, documents the proposed modifications to the FIDS Analysis methodology, and provides a new determination of the resulting measurement uncertainty for the F_Q and $F_{\Delta h}$ TS surveillance parameters

ANP-3243P report documents that these modifications yield results in surveillance parameters that compare well to the original methodology over the first 8 cycles. The report also documents that the results of the uncertainty analysis using all 15 completed cycles compared well to the results of the uncertainty analysis for the original YAEC-1855PA methodology. The report concludes that the revised FIDS analysis methodology remains comparable in accuracy and functionality to the original YAEC-1855PA methodology and the MIDS.

4.0 REGULATORY EVALUATION

4.1 Precedent

This revised uncertainty analysis proposed in this LAR has been prepared with deference to licensing precedent established by the current method contained within YAEC-1855PA. All changes made to FINC were justified by comparison of TS surveillance parameters to those obtained for the same state points using the code described in YAEC-1855PA. The revised FIDS analysis methodology is comparable in accuracy and functionality to the original YAEC-1855PA and MIDS.

4.2 Significant Hazards Consideration

The proposed change revises TS 6.8.1.6.b, Core Operating Limits Report, by adding AREVA Licensing Report ANP-3243P, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA," which supplements and modifies the previously approved methodology in YAEC-1855PA, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis," October, 1992. The proposed change also modifies the surveillance requirements associated with the heat flux hot channel factor and nuclear enthalpy rise hot channel factor to include revised uncertainty values when measurement is obtained using the fixed incore detector system (FIDS).

NextEra has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1.) Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The FIDS is used for core surveillances to provide confirmatory information on the neutron flux distribution of the core. This system is not used for accident mitigation and does not provide any automatic control functions or protective functions for the operation of the plant.

As the proposed change does not involve any changes to the physical equipment or operation of the system, there is no increase in the probability of an accident previously evaluated.

The proposed Technical Specification (TS) change determines a revised uncertainty value for the F_Q and $F_{\Delta h}$ TS surveillance parameters. ANP-3243P, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA,"documents that these modifications yield results in surveillance parameters that compare well to the original methodology over the first 8 cycles. The report also documents that the results of the uncertainty analysis using all 15 completed cycles compared well to the results of the uncertainty analysis for the original YAEC-1855PA methodology. The report concludes that the revised FIDS analysis methodology remains comparable in accuracy and functionality to the original YAEC-1855PA methodology and the moveable incore detector system.

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

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

Response: No

The operation of the facility in accordance with the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated since the proposed change will not affect plant safety analysis assumptions or the physical design of the facility. The revised uncertainty applied to the measured core peaking factors ensures the safety limits are maintained; hence, no new failure mode is introduced.

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

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

Response: No

Margin of safety is associated with confidence in the ability of the fission product barriers (i.e., fuel cladding, reactor coolant system pressure boundary, and containment structure) to limit the level of radiation dose to the public. The proposed changes to modify the FIDS methodology and provide revised uncertainty values for the F_Q and $F_{\Delta h}$ TS surveillance parameters do not involve a significant change in the method of plant operation, and no accident analyses will be affected by the proposed changes. Additionally, the proposed changes will not relax any criteria used to establish safety limits and will not relax any safety system settings. The safety analysis acceptance criteria are not affected by this change. The proposed change will not result in plant operation in a configuration outside the design basis. The proposed change does not adversely affect systems that respond to safely shutdown the plant and to maintain the plant in a safe shutdown condition.

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

5.0 ENVIRONMENTAL CONSIDERATION

10 CFR 51.22(c)(9) provides criteria for and identification of licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment. A proposed amendment of an operating license for a facility requires no environmental assessment if the operation of the facility in accordance with the proposed amendment does not: (1) involve a significant hazards consideration, (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (3) result in a significant increase in individual or cumulative occupational radiation exposure. NextEra Energy Seabrook has reviewed this license amendment request and determined that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of the amendment. The basis for this determination is as follows.

Basis

This change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) for the following reasons:

1. As demonstrated in the 10 CFR 50.92 evaluation, the proposed amendment does not involve a significant hazards consideration.

2. The proposed amendment does not result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite. The proposed amendment does not affect the amount or types of gaseous, liquid, or solid waste generated onsite. The proposed amendment does not directly or indirectly affect effluent discharges.

3. The proposed amendment does not result in a significant increase in individual or cumulative occupational radiation exposure. The proposed amendment does not change the source term or radiological release assumptions used in evaluating the radiological consequences described in the Seabrook Station Updated Safety Analysis Report (USAR). Hence, the proposed amendment does not result in a significant increase in individual or cumulative occupational radiation exposure.

6.0 REFERENCES

1. Licensing Report ANP-3243P, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA," Revision 0, July 2013.
2. YAEC-1855PA, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis," Joseph P. Gorski, October 1992.

Attachment 1

Marked-up Technical Specification Pages

The attached markups reflect the currently issued version of the TS and Facility Operating License. At the time of submittal, the Facility Operating License was revised through Amendment No. 137.

Listed below are the license amendment requests that are awaiting NRC approval and may impact the currently issued version of the Facility Operating License affected by this LAR.

LAR	Title	NextEra Energy Seabrook Letter	Date Submitted
11-04	Changes to the Technical Specifications for New and Spent Fuel Storage	SBK-L-11245	01/30/2012
12-04	License Amendment Request Regarding Cold Leg Injection Permissive	SBK-L-12179	03/13/2013
13-02	Application to Revise Technical Specifications to Adopt TSTF-510, "Revision to Steam Generator Program Inspection Frequencies and Tube Sample Selection," Using the Consolidated Line Item Improvement Process	SBK-L-13030	03/27/2013
13-03	Application for Technical Specification Changes Regarding Risk-Informed Justifications for the Relocation of Specific Surveillance Frequency Requirements to a Licensee Controlled Program	SBK-L-13071	05/28/2013
13-04	License Amendment and Exemption Requests to Allow use of Optimized ZIRLO Fuel Cladding in Core Reload Applications	SBK-L-13070	06/25/2013

The following TS pages are included in the attached markup:

Technical Specification	Title	Page
TS 3/4 2.2	Heat Flux Hot Channel Factor - $F_Q(Z)$	3/4 2-6 3/4 2-6b
TS 6.8.1.6.b	Core Operating Limits Report	6-19

SURVEILLANCE REQUIREMENTS

4.2.2.1 The provisions of Specification 4.0.4 are not applicable.

4.2.2.2 $F_Q(Z)$ shall be evaluated to determine if $F_Q(Z)$ is within its limits by:

a. Using the incore detectors to obtain a power distribution map at any THERMAL POWER greater than 5% of RATED THERMAL POWER.

b. Increasing the measured $F_Q(Z)$ component of the power distribution map by 3% to account for manufacturing tolerances and further increasing the value by 5% when using the moveable incore detectors or ~~6.21~~ 5.35% when using the fixed incore detectors to account for measurement uncertainties.

c. Satisfying the following relationship:

$$F_Q^M(Z) \leq \frac{F_Q^{RTP} \times K(Z)}{P \times W(Z)} \quad \text{for } P > 0.5$$

$$F_Q^M(Z) \leq \frac{F_Q^{RTP} \times K(Z)}{0.5 \times W(Z)} \quad \text{for } P \leq 0.5$$

where $F_Q^M(Z)$ is the measured $F_Q(Z)$ increased by the allowances for manufacturing tolerances and measurement uncertainty, F_Q^{RTP} is the F_Q limit, K(Z) is the normalized $F_Q(Z)$ as a function of core height, P is the relative THERMAL POWER, and W(Z) is the cycle dependent function that accounts for power distribution transients encountered during normal operation. F_Q^{RTP}, K(Z), and W(Z) are specified in the COLR.

d. Measuring $F_Q^M(Z)$ according to the following schedule:

1) Upon achieving equilibrium conditions after exceeding by 20% or more of RATED THERMAL POWER, the THERMAL POWER at which $F_Q(Z)$ was last determined*, or

2) At least once per 31 Effective Full Power Days (EFPD), whichever occurs first.

* During power escalation at the beginning of each cycle, power level may be increased until a power level for extended operation has been achieved and a power distribution map obtained.

g. The limits specified in Specification 4.2.2.2.c, 4.2.2.2.e, and 4.2.2.2.f above are not applicable in the following core plane regions:

1) Lower core region from 0 to 10%, inclusive.

2) Upper core region from 90 to 100%, inclusive.

4.2.2.3 When $F_Q(Z)$ is measured for reasons other than meeting the requirements of Specification 4.2.2.2, an overall measured $F_Q(Z)$ shall be obtained from a power distribution map and increased by 3% to account for manufacturing tolerances and further increased by 5% when using the moveable incore detectors or ~~5.2~~5.35% when using the fixed incore detectors to account for measurement uncertainty.

4.2.2.4 (THIS SPECIFICATION NUMBER IS NOT USED)

6.8.1.6.b (Continued)

8. YAEC-1856P, "System Transient Analysis Methodology Using RETRAN for PWR Applications," December, 1992.

   Methodology for Specification:
   2.2.1 - Limiting Safety System Settings
   3.1.1.3 - Moderator Temperature Coefficient
   3.1.3.5 - Shutdown Rod Insertion Limit
   3.1.3.6 - Control Rod Insertion Limits
   3.2.1 - AXIAL FLUX DIFFERENCE
   3.2.2 - Heat Flux Hot Channel Factor
   3.2.3 - Nuclear Enthalpy Rise Hot Channel Factor

9. YAEC-1752, "STAR Methodology Application for PWRs, Control Rod Ejection, Main Steam Line Break," October, 1990.

   Methodology for Specification:
   3.1.1.3 - Moderator Temperature Coefficient
   3.1.3.5 - Shutdown Rod Insertion Limit
   3.1.3.6 - Control Rod Insertion Limits
   3.2.1 - AXIAL FLUX DIFFERENCE
   3.2.2 - Heat Flux Hot Channel Factor
   3.2.3 - Nuclear Enthalpy Rise Hot Channel Factor

10. YAEC-1855PA, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis," October, 1992.

INSERT →

   Methodology for Specification:
   3.2.1 - AXIAL FLUX DIFFERENCE
   3.2.2 - Heat Flux Hot Channel Factor
   3.2.3 - Nuclear Enthalpy Rise Hot Channel Factor

11. YAEC-1624P, "Maine Yankee RPS Setpoint Methodology Using Statistical Combination of Uncertainties - Volume 1 - Prevention of Fuel Centerline Melt," March, 1988.

   Methodology for Specification:
   3.2.1 - AXIAL FLUX DIFFERENCE
   3.2.2 - Heat Flux Hot Channel Factor
   3.2.3 - Nuclear Enthalpy Rise Hot Channel Factor

INSERT

ANP-3243P, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA," Revision 0, July 2013.

ATTACHMENT 3

AREVA Affidavit for Proprietary Report ANP-3243P

AFFIDAVIT

COMMONWEALTH OF VIRGINIA)
) ss.
CITY OF LYNCHBURG)

1. My name is Gayle F. Elliott. I am Manager, Product Licensing, for AREVA NP Inc. (AREVA NP) and as such I am authorized to execute this Affidavit.

2. I am familiar with the criteria applied by AREVA NP to determine whether certain AREVA NP information is proprietary. I am familiar with the policies established by AREVA NP to ensure the proper application of these criteria.

3. I am familiar with the AREVA NP information contained in the report ANP-3243(P), Revision 0 entitled, "Seabrook Station Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA," dated July 2013 and referred to herein as "Document." Information contained in this Document has been classified by AREVA NP as proprietary in accordance with the policies established by AREVA NP for the control and protection of proprietary and confidential information.

4. This Document contains information of a proprietary and confidential nature and is of the type customarily held in confidence by AREVA NP and not made available to the public. Based on my experience, I am aware that other companies regard information of the kind contained in this Document as proprietary and confidential.

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 AREVA NP to determine whether information should be classified as proprietary:

(a) The information reveals details of AREVA NP'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 AREVA NP.

(d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for AREVA NP in product optimization or marketability.

(e) The information is vital to a competitive advantage held by AREVA NP, would be helpful to competitors to AREVA NP, and would likely cause substantial harm to the competitive position of AREVA NP.

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

7. In accordance with AREVA NP'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 AREVA NP only as required and under suitable agreement providing for nondisclosure and limited use of the information.

8. AREVA NP 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.

SUBSCRIBED before me this 25

day of July, 2013.

DANITA R. KIDD
COMMONWEALTH OF VIRGINIA
NOTARY PUBLIC

Danita R. Kidd
NOTARY PUBLIC, STATE OF VIRGINIA
MY COMMISSION EXPIRES: 12/31/16
Reg. # 205569