

From: [Hall, Randy](#)
To: [Craig D Sly \(Generation - 6\)](#); [Diane Aitken \(Generation - 6\) \(diane.aitken@dominionenergy.com\)](#)
Subject: North Anna Power Station Units 1 and 2 And Surry Power Station Units 1 and 2 – NRC Request for Additional Information Regarding License Amendment Request for EOF Consolidation (EPID L-2018-LLA-0014)
Date: Tuesday, May 01, 2018 3:38:00 PM
Attachments: [Dominion EOF Consolidation RAIs.docx](#)

May 1, 2018

Mr. Craig Sly
Manager, Nuclear Regulatory Affairs
Virginia Electric and Power Company

Dear Mr. Sly,

By letter dated January 16, 2018 (Agencywide Documents Access and Management System Accession No. ML18025B468), the Virginia Electric and Power Company (Dominion, the licensee) submitted a license amendment request (LAR) for the North Anna Power Station, Units 1 and 2, and the Surry Power Station, Units 1 and 2, and their associated independent spent fuel storage installations. The proposed amendments, if granted, would authorize changes to the NAPS and SPS emergency plans and would allow the consolidation of both sites' current emergency operations facilities (EOF) into a central EOF.

The NRC staff has reviewed the information provided by Dominion in the LAR, and has determined that additional information is needed to complete its evaluation, as stated in the attached Request for Additional Information (RAI). Dominion's timely and thorough response to the RAI is requested in order to meet your desired schedule.

Please let me know if Dominion would like a clarification call regarding the attached RAI. The goal of a call would be to ensure that the RAI questions are understandable, the regulatory basis for the questions is clear, and to determine whether any of the information requested was previously docketed. Following a clarification call, or your confirmation that a call is not necessary, the staff's RAI will be documented as an Official Agency Record in ADAMS. In order to meet our current review schedule, Dominion is requested to provide a written response to the RAI no later than May 31, 2018.

If you have any questions, please contact me at (301) 415-4032.

Sincerely,

Randy Hall, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation
USNRC
(301) 415-4032
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REQUEST FOR ADDITIONAL INFORMATION
REGARDING LICENSE AMENDMENT REQUEST FOR EMERGENCY PLAN CHANGE
VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
SURRY POWER STATION
DOCKET NOS. 50-338, 50-339, 50-280 AND 50-281

By letter dated January 16, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18025B468), Virginia Electric Power Company (Dominion Energy Virginia, the licensee), requested the U.S. Nuclear Regulatory Commission (NRC) to approve license amendments revising the emergency plans for North Anna Power Station (NAPS), Units 1 and 2, and Surry Power Station (SPS), Units 1 and 2. The proposed amendments would consolidate the NAPS and SPS local emergency operations facilities (EOFs), their common back-up central EOF, and their headquarters support organization. Dominion Energy Virginia is also proposing additional changes, which have been determined to require prior NRC staff approval in accordance with §50.54(q)(4) to Title 10 of the *Code of Federal Regulations* (10 CFR).

The questions in the request for additional information (RAI) listed below are necessary to facilitate the NRC staff's technical review of the application. A timely and thorough response to these questions is requested in order to meet the desired schedule.

RAI-1

Attachment 1, "Discussion of Proposed Changes," (page 7 of 30) states, in part:

If the proposed CERC [Corporate Emergency Response Center] becomes unavailable during an event, the NAPS and SPS TSCs [Technical Support Centers] will have the capability to determine PARs [protective action recommendations] for the public, notify offsite agencies, and perform dose assessments.

However, Attachment 1 (page 8 of 30) also states, in part:

Upon implementation of the proposed consolidation, the CERC staff will coordinate site field team activities and be the lead facility for dose assessments.

Please clarify whether the respective TSC at each site will also have the capability to coordinate field team activities, in addition to the capabilities listed on pg. 7 of 30 in Attachment 1, if the proposed CERC becomes unavailable.

RAI-2

Section IV.E.8.b to Appendix E of 10 CFR Part 50 discusses provisions that must be made for locating NRC and offsite responders closer to the nuclear reactor site if an emergency response facility is located more than 25 miles from the site(s) that it serves. In addition, Section IV.E.8.b(4) to Appendix E of 10 CFR Part 50 specifically states, in part, that such a facility shall provide, "Access to plant **data and** radiological information; and..." [**bold/italics** added].

Attachment 1, "Discussion of Proposed Changes," (Page 10 of 50) states, in part:

...access to plant data and radiological information are also provided....

However, in Section 7.1.7, "Near-Site Location For Offsite Agency Coordination," of both Attachment 5, "Proposed Changed NAPS Emergency Plan Pages," and Attachment 7 "Proposed Changed SPS Emergency Plan Pages," it merely states, in part:

...access to plant radiological information.

Please explain the discrepancy between the proposed emergency plans with the description in Attachment 1 regarding the ability of the NAPS and SPS near-site facilities to provide access to both radiological information and plant data.

RAI-3

Attachment 3, "Additional NAPS and SPS Emergency Plan Changes Requiring NRC Approval," (page 2 of 19) states, in part:

The NAPS and SPS emergency plans state these goals as approximations, do not define the time from which achieving these goals is measured, and do not define ERF activation.

Attachment 3 (page 4 of 19) further states, in part:

The proposed change is to specify that the start time for augmentation is the declaration of an Alert or higher emergency class (unless special circumstances apply)....

It is not clear to the staff why this proposed wording to specify a start time for augmentation is part of the license amendment request. Listed below are several excerpts from NRC documents that clearly specify that the start time for augmentation, as approved previously by the NRC, is at an Alert or higher classification:

- The NRC Office of Inspection and Enforcement (IE) Report, "IE Emergency Preparedness Appraisal Reports 50-338/82-05 & 50-339/82-05 on 820216-26," dated July 1, 1982 (ADAMS Legacy No. 8208030486) states, in part:

...assumes the responsibility for dose assessment in the EOF, as shown in Table 5.1 of the Emergency Plan as augmenting the Station staff within 60 minutes of the declaration of an emergency.

- NRC Letter, “Surry and North Anna Proposed Emergency Plan Changes,” dated May 18, 1990 (ADAMS Legacy No. 9006070295) states, in part:

The proposed revisions would allow the Core/Thermal Hydraulic Engineer position to be augmented in 60 minutes following an emergency declaration....

- NRC Letter, “Review if Proposed Cost Beneficial Licensing Action Request for Emergency Plan Changes for North Anna Power Station (TAC Nos. M93602 and M93603),” dated December 12, 1995 (ADAMS Legacy No. 9512150146) states, in part:

With this proposed revision, the licensee also specified a facility activation goal of 60 minutes for the local emergency operations facility (EOF), technical support center (TSC), and operational support center (OSC) at an Alert or higher classification.

- NRC Letter, “Surry Power Station, Units 1 and 2 Emergency Plan Revisions (TAC Nos. M93553 and M93554),” dated December 13, 1995 (ADAMS Legacy No. 9512160044) states, in part:

With this proposed revision, Virginia Power also specified a facility activation goal of 90 minutes for the local emergency operations facility (EOF) and 60 minutes for the technical support center (TSC), and operational support center (OSC) at an Alert or higher classification.

Please explain why this license amendment proposes to specify that the start time for augmentation is at a declaration of an Alert or higher given that this is already clearly defined in previously approved NRC documents.

RAI-4

In Attachment 3 (page 2 of 19), Dominion Energy Virginia states, in part: [***bold/italics*** added]

Dominion Energy Virginia proposes to clarify references to emergency response organization (ERO) augmentation and emergency response facility (ERF) activation goals. The NAPS and SPS emergency plans state these goals as approximations, ***do not define the time from which achieving these goals is measured***, and do not define ERF activation. In addition, there is an inconsistency between the NAPS and SPS emergency plan activation goals for the existing local emergency operations facilities (EOFs), and augmentation goals for select EOF and headquarters support positions.

In Attachment 3 (page 4 of 19), Dominion Energy Virginia further states, in part: [***bold/italics*** added]

The proposed change is to ***specify that the start time for augmentation is the declaration of an Alert or higher emergency class (unless special circumstances apply), clarify references to approximate times by rounding-up approximations to the next quarter hour (e.g. approximately 60 minutes***

becomes 75 minutes), align NAPS and SPS ERFs activation goals with the proposed Corporate Emergency Response Center (CERC) activation goal, and define ERF activation as the assembly of required positions in or under the operational control of the designated ERF lead and their declaring the facility activated. Special circumstances include those where the movement of emergency responders could place them at risk, e.g., security conditions, severe weather, hazardous environments.

The NAPS and SPS ***on-shift staffing analyses (OSAs) showed that, for the event sequences analyzed, on-shift responders can appropriately respond to the emergency without an augmented staff for a time period of up to 90 minutes.*** Thus, the on-shift staff can analyze the conditions and declare the appropriate emergency class within the 15 minutes required by 10 CFR 50, Appendix E, Section IV.C.2, notify the Commonwealth of Virginia Emergency Operations Center (EOC) and site-specific risk-jurisdiction 911 Centers, and respond to the event for 75 minutes after event declaration.

The regulation at 10 CFR 50.47(b)(2) discusses the need for timely augmentation of response capabilities. In addition, the NRC issued Regulatory Issue Summary (RIS) 2016-10, "License Amendment Requests for Changes to Emergency Response Organization Staffing and Augmentation," dated August 5, 2016 (ADAMS Accession No. ML16124A002), to inform licensees of the application of guidance documents to support license amendment requests to change augmenting emergency response organization response times. Specifically, the NRC has identified the need to clarify the application of the Nuclear Energy Institute (NEI) document NEI 10-05, "Assessment of On-Shift Emergency Response Organization Staffing and Capabilities," dated June 23, 2011 (ADAMS Accession No. ML111751698).

RIS 2016-10 states, in part: [***bold/italics*** added]

The NRC staff has recently received multiple LARs [license amendment requests] that seek to change ERO staffing commitments by extending the augmentation time for certain positions, or eliminating the staffing for positions entirely. ***In each case, the change has been justified primarily by referencing the on-shift staffing analysis developed in accordance with NEI 10-05, or a similar analysis using different accident scenarios. These LARs indicate a misunderstanding on how NEI 10-05 and the associated staffing analysis can be used effectively in the justification of proposed staffing changes.***

The guidance in NEI 10-05 focuses on the capabilities of the on-shift staff, specifically to identify collateral duties that could interfere with the performance of on-shift emergency preparedness (EP) functions/capabilities. ***NEI 10-05 does not consider the capabilities offered by the augmenting ERO staff to relieve and support on-shift staffing for the purposes of providing justification for extension of ERO response times.*** An on-shift staffing review using NEI 10-05 should ensure sufficient on-shift staff exists to perform all necessary EP functions and capabilities until augmenting ERO staff arrives, in accordance with the site's emergency plan commitments.

The guidance in NEI 10-05, Section 2.14, "Changes to ERO Response Times," may be used to identify if there is an on-shift position that has the necessary

training to perform a major task as described in NUREG-0654, Table B-1, but is not currently credited for performing EP functions and capabilities that are assigned to an augmenting responder. This would allow the assignment of an augmented major task to that on-shift position, thereby maintaining the capability to perform the major task of the emergency plan while eliminating the need for an augmented responder to perform the tasks. The reassignment of these tasks to the on-shift position would need to be reflected in the emergency plan.

However, an evaluation performed using only the guidance of NEI 10-05 does not satisfy the requirement to identify and evaluate changes to ERO augmentation timing or ERO augmentation staffing that reduces the capability to perform an emergency planning function. Following the guidance from RG 1.219, [“Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors,” dated July 2016, (ADAMS Accession No. ML16061A104)] LARs that seek approval for changes to on-shift staffing and the augmenting ERO (e.g., staffing levels, response timing) should identify each change and evaluate them individually.

The Dominion Energy Virginia request merely provides a discussion about the OSA and clarification of the approximation of the activation time. Based on the information provided in RAI-3 related to the start time being based on an emergency classification, there is not sufficient justification provided in the request for a time extension for each ERO position at the NAPS and SPS facilities as outlined in RIS 2016-10. Please provide further justification for the proposed extension of the augmentation timing to 75 minutes from event declaration for each ERO position impacted.

RAI-5

Dominion Energy Virginia proposes to expand the “off-hours” drill or exercise timeframe to include 4:00 a.m. to 6:00 p.m. on weekends, in addition to the 6:00 p.m. to 4 a.m. timeframe provided in current guidance defining “off-hours.” In its justification, Dominion Energy Virginia states:

The 10 CFR 50.47(b)(14) emergency planning standard for conducting drills and exercises will continue to be met because a drill or exercise will continue to be started outside normal working hours during the eight-year exercise cycle. Starting a drill or exercise between “4:00 a.m. and 6:00 p.m. on a weekend” is equivalent to starting a drill or exercise between “6:00 p.m. and 4 a.m.” because the majority of licensee staff will be away from their normal work location when augmentation processes are initiated.

Guidance in NSIR/DPR-ISG-01, “Emergency Planning for Nuclear Power Plants”, Section IV.G, “Challenging Drills and Exercises,” discusses that criteria for conducting off-hours drills or exercises would be included in the update to NUREG-0654 as Evaluation Criterion N.1.c:

Provisions must be made to start a drill or exercise between 6:00 p.m. and 4:00 a.m. at least once in every eight-year exercise cycle. Some drills or exercises should be unannounced.

Guidance in the joint NRC/Federal Emergency Management Agency (FEMA) document, NUREG-0654/FEMA-REP-1, Rev. 1, Supplement 4, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, dated October 2011, states, in part:

NEW EVALUATION CRITERION:

FEMA no longer requires OROs [offsite response organizations] to participate in off-hours and unannounced exercises. In order to retain the requirement for licensees, it has been deleted from Evaluation Criterion N.1.b and moved to a new Evaluation Criterion, N.1.c:

NEW CRITERION N.1.c

Provisions must be made to start a drill or exercise between 6:00 p.m. and 4:00 a.m. at least once in every 8-year exercise cycle. Some drills or exercises should be unannounced.

Draft NUREG-0654/FEMA-REP-1, Revision 2, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," was published for comment on the *Federal Register* (FR) on May 29, 2015 (80 FR 30739). There were no comments made related to proposed guidance in Evaluation Criterion N.1.c.

The justification provided by Dominion Energy Virginia expands the interpretation of the drill and exercise timeframe beyond that which is provided in the guidance. Please provide further justification as to why the expanded timeframe in the request provides an adequate challenge to ERO augmentation as a drill or exercise initiated during the 6:00 p.m. to 4:00 a.m. timeframe in current guidance, or revise this discussion in accordance with current NRC guidance.