

**From:** Michael Scott  
**To:** David\_batalo@dom.com; Joseph\_Hegner@dom.com  
**Date:** 5/26/04 3:04PM  
**Subject:** DRAFT REQUESTS FOR ADDITIONAL INFORMATION PACKAGE 7

Gentlemen:

Please find attached the NRC staff's seventh package of preliminary questions, in the form of draft requests for additional information (RAIs), for the North Anna ESP review.

Dominion may request a phone conference with the cognizant NRC staff if Dominion needs clarification of the RAIs or believes the information requested in them has already been provided or is not needed. Please let me know if you desire such a phone con. To support the NRC's objective of mailing all the Dominion ESP RAIs by June 3, 2004, the phone con needs to occur by June 1, 2004.

After the phone con occurs (if requested) and planned response dates are determined, the staff will send the RAIs under cover letter with copy to the docket. The letter will also note that the phone con occurred (if it did) and the mutually agreed upon response date(s) to the RAIs.

The RAIs in this package address various areas. With regard to emergency planning, the Federal Emergency Management Agency (FEMA) has reviewed emergency planning information submitted in the ESP application, including information related to the operating plants at North Anna.

The staff notes that the scope of an ESP application review is different from the NRC's oversight of operating plant emergency planning. The North Anna ESP application includes a "major features emergency plan" pursuant to 10 CFR 52.17(b)(2)(i), which takes into account certain elements of the emergency plan in place at North Anna Units 1 and 2. For Dominion's submittal, the ESP review includes evaluation of information submitted, including the evacuation time estimate, as well as state and local emergency plans, notwithstanding the fact that some of this information may also be part of an ongoing reactor oversight process with respect to Units 1 and 2.

Your timely response to these RAIs will support meeting the review schedule milestones. Partial submittals would be welcome to minimize delays.

Please contact me if you have questions.

Michael L (Mike) Scott  
Senior Project Manager  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Phone (301) 415-1421

**CC:** Bruce Musico; Daniel Barss; David Matthews; Eric Weiss; Frank Gillespie; James Lyons; Jay Lee; Kazimieras Campe; Laura Dudes; Mark Rubin; Nader Mamish; Nanette Gilles; R. Brad Harvey; Raj Anand; Robert Dennig; Stephanie Coffin; Stephen Dinsmore; Stephen Raul Monarque

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EWV CC (Eric Weiss)	Opened	05/26/04 03:39PM
FPG CC (Frank Gillespie)		
JYL1 CC (Jay Lee)	Opened	05/26/04 03:38PM
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MPR CC (Mark Rubin)	Opened	05/27/04 07:01PM
RBH CC (R. Brad Harvey)	Opened	05/26/04 03:10PM
SCD1 CC (Stephen Dinsmore)	Opened	05/27/04 08:05AM
SMC1 CC (Stephanie Coffin)	Opened	05/26/04 03:18PM
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JEL CC (James Lyons)	Opened	05/26/04 05:32PM
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NLM CC (Nader Mamish)	Opened	05/26/04 04:59PM
NVG CC (Nanette Gilles)	Opened	05/26/04 03:06PM
RKA CC (Raj Anand)	Opened	05/26/04 03:54PM
RLD CC (Robert Dennig)	Opened	05/26/04 03:17PM
SRM2 CC (Stephen Raul Monarque)	Opened	05/26/04 03:27PM
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MESSAGE	3271	05/26/04 03:04PM

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## DRAFT

### North Anna Early Site Permit Application Site Safety Analysis Report (SSAR) Requests for Additional Information (RAI) RAI LETTER NO. 7

#### SSAR Section 1.8, Conformance to NRC Regulations and Regulatory Guidance

##### RAI 1.8-1

Please provide a comprehensive listing of NRC regulations and regulatory guidance applicable to the Dominion early site permit (ESP) SSAR and the affected SSAR sections. For example, please state whether 10 CFR 100.21(f) and Regulatory Guide (RG) 4.7 apply to SSAR Section 13.6, and whether Regulatory Guide 1.183 applies to SSAR Section 15.0.

#### SSAR Section 2.2.3, Evaluation of Potential Accidents

##### RAI 2.2.3-1

Please identify hazards, if any, associated with the existing North Anna, Units 1 and 2 that could pose an undue risk to new reactor(s) that might be constructed and operated at the ESP site.

#### SSAR Section 2.3.1, Regional Climatology

##### RAI 2.3.1-6

The methodology used to determine site-specific design-basis tornado parameters as discussed in the response to RAI 2.3.1-1(g) is very sensitive to changes in F class of 1 or 2 tornadoes when the total number of tornadoes is small (24). Consequently, the uncertainty in the estimate of the wind speed is large. Please calculate the site tornado parameters using a 2-degree square box and provide the staff a copy of the resulting calculation/analysis.

#### SSAR Section 2.3.4, Short-Term (Accident) Diffusion Estimates

##### RAI 2.3.4-1

Please provide the results of executing the PAVAN computer code using the wind speed categories discussed in Section 4.6 of NUREG/CR-2858 (i.e., 0.5, 0.75, 1.0, 1.25, 1.5, 2.0, 3.0, 4.0, 5.0, 6.0, 8.0, and 10 m/sec). Also, please provide a copy of the input file(s) used to execute PAVAN.

#### SSAR Section 2.3.5, Long-Term (Routine) Diffusion Estimates

##### RAI 2.3.5-1

Please provide a copy of the input file(s) used to execute XOQDOQ in support of calculating the long term (routine release)  $\chi/Q$  and D/Q values presented in SSAR Section 2.3.5.

RAI 2.3.5-2

SSAR Section 2.3.5 and Table 2.3-16 present bounding maximum annual  $\chi/Q$  and D/Q values at or beyond the site boundary for routine releases. However, the SSAR Section 1.8.1 discussion on Regulatory Guide 1.70 (top of SSAR Page 2-1-63, Revision 0) states that the maximum annual average  $\chi/Q$  values at or beyond the site boundary for each venting location will be provided in the COL application. Please explain the difference between these two statements.

SSAR Section 13.3, Emergency Planning

RAI 13.3-10

SSAR Section 13.3.2.2.2.k (Radiological Exposure Control) relies on the existing North Anna units' radiological protection procedures, stating that the procedures would be applicable to the ESP site or would be addressed in future radiological protection procedures. SSAR Section 13.3.2.2.2.k.4 (Authorization of Exposure Above Dose Limits), which substantively repeats a portion of NAEP Section 6.4.1 (Emergency Exposure Limits), states that approval from the "emergency coordinator" is necessary for planned exposures greater than the 10 CFR 20 annual limits. NAEP Section 6.4.1 states that this approval will be from the "Station Emergency Manager." Please explain the difference in the designated approval source.

RAI 13.3-11

Please provide inter-County and State agreements, which reflect an awareness of the ESP application.

RAI 13.3-12

The current evacuation time estimate (ETE) is dated November 2, 2001. Please provide a copy of the prior ETE study, believed to have been conducted by Virginia Tech in 1991.

RAI 13.3-13

Please provide the following information related to the Evacuation Time Estimate (ETE):

- (a) Effect on the ETE of extrapolation of population data to future years, including accounting for increases in permanent resident and transient populations (including at the North Anna Power Station) as a result of operation of new reactors at the site.
- (b) Capacities of evacuation assembly centers (EACs).

RAI 13.3-14

Please provide a cross-reference to information in State and Local emergency plans that is used to demonstrate compliance with each State and Local evaluation criterion in Supplement 2 to NUREG-0654/FEMA-REP-1.

RAI 13.3-15

Please provide the following information regarding the State and Local emergency plans:

- (a) Availability and assistance of laboratories referred to in the plans.
- (b) Description of periodic program in Orange County for informing the public of how they will be notified and what actions should be taken during an emergency.
- (c) Description of program in Orange County for periodic, non-emergency briefings for the media.
- (d) Explanation for differences between assumptions in the SSAR and assumptions in the State emergency plan regarding reliance on the U.S. Department of Energy for airborne radioactive plume tracking.
- (e) Clarification of the use of Patrick Henry High School as an evacuation assembly center (EAC) and an alternate remote assembly area (RAA).
- (f) Mutually agreed upon onsite assistance, such as traffic control, between the applicant and other agencies such as the State of Virginia and Louisa County.
- (g) Description of measures in Orange County and in the Commonwealth of Virginia RERP (COVRERP) for dealing with potential impediments to use of evacuation routes.
- (h) Guidance and/or criteria for when sheltering should be considered.
- (i) Decision-making guidance for emergency workers to exceed U.S. Environmental Protection Agency exposure limits.
- (j) Measures (e.g., pocket dosimeter limits) to ensure that the use of an exposure control ratio, as described in the COVRERP, does not result in emergency workers exceeding exposure limits.
- (k) Descriptions in County RERPs of contacts and arrangements made for local and backup hospital and medical services.
- (l) Descriptions in State and County RERPs of the training program or qualification method for directors/coordinators of emergency response.
- (m) Descriptions in the COVRERP and County RERPs of training programs for personnel performing radiological monitoring.
- (n) Descriptions in the COVRERP and County RERPs of training programs for medical support personnel.
- (o) Description of training program for the Orange County Emergency Services Coordinator.
- (p) Description in the Orange County RERP of criteria or plans for periodic review and update of the plan or agreements.

- (q) Cross-references in the Orange County RERP to the criteria in Supplement 2 to NUREG-0654/FEMA-REP-1.