

## NorthAnnaRAIsPEm Resource

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**From:** Patel, Chandu  
**Sent:** Thursday, April 07, 2011 3:49 PM  
**To:** 'na3raidommailbox@dom.com'  
**Cc:** Weisman, Robert; NorthAnnaRAIsPEm Resource; McBride, Mark  
**Subject:** RAI Letter No. 63, RAI 5574, Section 2.4.2, North Anna 3 COLA  
**Attachments:** RAI 5574 Final.doc

By letter dated November 26, 2007, Dominion Virginia Power (Dominion) submitted a Combined License Application for North Anna, Unit 3, pursuant to Title 10 of the *Code of Regulations*, Part 52. The U.S. Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this COLA.

The NRC staff has identified that additional information is needed to continue portions of the review and a Request for Additional Information (RAI), is enclosed. To support the review schedule, Dominion is requested to respond within 30 days of the date of this request. If the RAI response involves changes to the application documentation, Dominion is requested to include the associated revised documentation with the response.

Sincerely,  
Chandu Patel  
Lead Project Manager for NA3 COLA

**Hearing Identifier:** NorthAnna3\_eRAI  
**Email Number:** 10

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**From:** Patel, Chandu

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Tracking Status: None

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Tracking Status: None

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Request for Additional Information Letter No. 63  
4/7/2011  
North Anna, Unit 3  
Dominion  
Docket No. 52-017  
SRP Section: 02.04.02 - Floods  
Application Section: 02.04.02 - Floods

QUESTIONS for Hydrologic Engineering Branch (RHEB)

Request for Additional Information No. 5574

02.04.02-8

FSAR Revision 3 Section 2.4.2.2 Flood Design Considerations reports a design basis flood elevation that is 23.47 ft below the Unit 3 plant grade of 290.0 ft NAVD88. FSAR Revision 3 Section 2.4.2.3 Effects of Local Intense Precipitation reports the maximum water level of 288.9 ft NAVD88 for the local PMP. In order to meet the regulatory requirements stated in 10 CFR 52.79 and 10 CFR 100.20(c) Staff requests clarification as to why the reported design basis flood elevation is lower than the maximum flood elevation from the local PMP, particularly noting that Regulatory Guide 1.59 indicates that severe local precipitation is a possible cause for worst site related flooding.

02.04.02-9

In order to analyze the impacts of local intense precipitation on flooding and drainage, the Applicant computed the effects of locally-intense precipitation in FSAR Revision 3 Section 2.4.2. The Applicant also provided response to a previously issued RAI 2.4.2-2 Item (c) (March 9, 2009, ML090680312), which requested the Applicant to provide map(s) that indicate locations where flood events produce velocities larger than the design velocity for the channel bed material or are capable of eroding overland flow areas (i.e., where damage exceeding normal maintenance would result). In the response (Letter 33) to the aforementioned RAI, the Applicant provided a map identifying locations with supercritical velocities and hydraulic jumps. Staff's review of the response revealed that a corresponding map is not provided showing the locations of supercritical velocities and hydraulic jumps for the modified storm water management system.

In order to meet the regulatory requirements of 10 CFR 52.79 and 10 CFR 100.20(c), Staff requests that the Applicant provide a map identifying locations with supercritical velocities and hydraulic jumps, as computed in the HEC-RAS model analysis, for inclusion in the FSAR.