Power Reactor

Event #

47446

Site: NORTH ANNA

Notification Date / Time: 11/16/2011

11:35 (EST)

Unit: 3

Region: 2 State: VA Event Date / Time: 09/13/2011

09:00 (EST)

Reactor Type: (3) M-4-LP, (4) M-4-LP

Last Modification: 11/16/2011

Containment Type: DRY SUB DRY SUB

Notifications: STEVEN VIAS

R2DO

NRC Notified by: JOSEPH HEGNER

**HQ Ops Officer:** HOWIE CROUCH

PART 21 GROUP

**Emergency Class: NON EMERGENCY** 10 CFR Section:

21.21

UNSPECIFIED PARAGRAPH

Jnit	Scram Code	RX Crit	Init Power	Initial RX Mode	Curr Power	Current RX Mode
3	N	No	0	Under Construction	0	Under Construction

## EARLY SITE PERMIT POSTULATED SEISMIC ACCELERATION IS LESS THAN PROJECTED BASED ON NEW INFORMATION

"On August 23, 2011, an earthquake occurred with an epicenter 11 miles from the North Anna Unit 3 site. Instruments recorded earthquake data at the North Anna Unit 1 containment structure base mat. Certified data regarding the earthquake was received on September 13, 2011 and a Condition Report was initiated. This best available earthquake data exceeded at low frequencies the Safe-Shutdown Earthquake (SSE) response spectra established in the North Anna Early Site Permit (ESP-003). The event data also exceeded the site 250 foot elevation Ground Motion Response Spectra (GMRS) and the hard rock SSE developed for the North Anna Unit 3 Combined Operating License Application (COLA) based on the ESP SSE spectra.

"The US-APWR standard plant (i.e., Reactor Building Complex and Power Source Building) Certified Seismic Design Response Spectra (CSDRS) envelops the actual seismic response recorded on August 23, 2011. However, the site-specific Seismic Category I Ultimate Heat Sink Related Structures, Essential Service Water Pipe Tunnel and Power Source Fuel Storage Vault use design inputs presented in the ESP. The recorded seismic response on August 23, 2011 exceeded the seismic design spectra presented in the ESP and COLA.

"As defined in 10 CFR 21, this condition represents a 'deviation' in the seismic design information contained in the ESP and a 'defect' in that it involves a 'basic component' that could result in a major design deficiency that has safety implications, if it were to remain uncorrected. Therefore, NRC notification of this condition is required pursuant to 10 CFR 21.21(d)(1). The basis for this conclusion is discussed in the following paragraph.

"In August 2007, the NRC amended the regulations applicable to the licensing and approval processes for nuclear power plants (e.g., ESP, COLA) to clarify various requirements, and made conforming amendments to other related regulations, including 10 CFR21. The discussion of changes to 10 CFR 21 (Federal Register / Vol. 72, No.

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166, Page 49424) states that: 'services that are required to support an early site permit application (e.g., geologic or seismic analyses, etc.) that are safety-related and could be relied upon in the siting, design, and construction of a nuclear power plant, are to be treated as basic components as defined in part 21.' The discussion also states: 'if the ESP holder becomes aware of a significant safety concern with respect to its site (e.g., that the specified site characteristics for seismic acceleration is less than the projected acceleration due to new information), the concern should be reported to the NRC so that it may be considered in the review of any future application referencing the ESP.' Based on these statements of consideration, the analyses supporting the seismic design information in the ESP would be considered a 'basic component' and the recorded response data from the August 23, 2011 seismic event represents new information that impacts the seismic analyses.

"This defect resulted from new data, not an error in the performance of the seismic analyses for the ESP. While there was no error in the performance of the seismic analyses, Dominion is assessing whether any changes should be made to the North Anna Unit 3 COLA."

The licensee will be notifying the NRC Resident Inspector.

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ADDITIONAL INFORMATION

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