

Power Reactor

Event # 47446

<b>Site:</b> NORTH ANNA		<b>Notification Date / Time:</b> 11/16/2011 11:35 (EST)	
<b>Unit:</b> 3	<b>Region:</b> 2	<b>State :</b> VA	<b>Event Date / Time:</b> 09/13/2011 09:00 (EST)
<b>Reactor Type:</b> (3) M-4-LP, (4) M-4-LP		<b>Last Modification:</b> 11/16/2011	
<b>Containment Type:</b> DRY SUB DRY SUB			
<b>NRC Notified by:</b> JOSEPH HEGNER		<b>Notifications:</b> STEVEN VIAS R2DO	
<b>HQ Ops Officer:</b> HOWIE CROUCH		PART 21 GROUP	
<b>Emergency Class:</b> NON EMERGENCY			
<b>10 CFR Section:</b>			
21.21	UNSPECIFIED PARAGRAPH		

  

Unit	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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NRC FORM 361 (12-2000)	<b>REACTOR PLANT EVENT NOTIFICATION WORKSHEET</b>	U.S. NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER  EN #
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NRC OPERATION TELEPHONE NUMBER: PRIMARY – 301-816-5100 or 800-532-3469\*, BACKUPS – [1st] 301-951-0550 or 800-449-3694\*, [2nd] 301-415-0550 and [3rd] 301-415-0553 \*Licensees who maintain their own ETS are provided these telephone numbers.

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	NAME OF CALLER	CALL BACK #
11:35 EST	North Anna Unit 3 Project	3	Joseph Hegner	(804) 273-2770

EVENT TIME & ZONE	EVENT DATE	POWERMODE BEFORE	POWERMODE AFTER
09:00 EDT	09/13/2011	N/A	N/A

EVENT CLASSIFICATIONS		1-Hr. Non-Emergency 10 CFR 50.72(b)(1)	(v)(A) Safe S/D Capability	AINA
GENERAL EMERGENCY	GEN/AECC	TS Deviation	(v)(B) RHR Capability	ANB
SITE AREA EMERGENCY	SIT/AECC	<b>4-Hr. Non-Emergency 10 CFR 50.72(b)(2)</b>	(v)(C) Control of Rad Release	ANC
ALERT	ALE/AECC	(i) TS Required S/D	(v)(D) Accident Mitigation	AND
UNUSUAL EVENT	UNL/AECC	(iv)(A) ECCS Discharge to RCS	(xii) Offsite Medical	AMED
50.72 NON-EMERGENCY	(see next columns)	(iv)(B) RPS Actuation (scream)	(xiii) Loss Comm/Asmt/Resp	ACOM
PHYSICAL SECURITY (73.71)	DDDD	(xi) Offsite Notification	<b>60-Day Optional 10 CFR 50.73(a)(1)</b>	
MATERIAL/EXPOSURE	B7??	<b>8-Hr. Non-Emergency 10 CFR 50.72(b)(3)</b>	Invalid Specified System Actuation	ANV
FITNESS FOR DUTY	FFIT	(ii)(A) Degraded Condition	<b>Other Unspecified Requirement (Identify)</b>	
OTHER UNSPECIFIED REQMT.	(see last column)	(ii)(B) Unanalyzed Condition	✓ 10 CFR 21.21	NONR
INFORMATION ONLY	NMF	(iv)(A) Specified System Actuation	AESF	NONR

**DESCRIPTION**

Include: Systems affected, actuations and their initiating signals, causes, effect of event on plant, actions taken or planned, etc. (Continue on back)

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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 CFR 21. The discussion of changes to 10 CFR 21 (Federal Register / Vol. 72, No. 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.

NOTIFICATIONS	YES	NO	WILL BE	ANYTHING UNUSUAL OR NOT UNDERSTOOD?	<input type="checkbox"/> YES (Explain above)	<input checked="" type="checkbox"/> NO
NRC RESIDENT			✓			
STATE(s)		✓		DID ALL SYSTEMS FUNCTION AS REQUIRED?	<input type="checkbox"/> YES	<input type="checkbox"/> NO (Explain above)
LOCAL		✓				
OTHER GOV AGENCIES		✓		MODE OF OPERATION UNTIL CORRECTED:	ESTIMATED RESTART DATE:	ADDITIONAL INFO ON BACK
MEDIA/PRESS RELEASE		✓				<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

ADDITIONAL INFORMATION

RADIOLOGICAL RELEASES: CHECK OR FILL IN APPLICABLE ITEMS (specific details/explanations should be covered in event description)						
LIQUID RELEASE	GASEOUS RELEASE	UNPLANNED RELEASE	PLANNED RELEASE	ONGOING	TERMINATED	
MONITORED	UNMONITORED	OFFSITE RELEASE	T. S. EXCEEDED	RM ALARMS	AREAS EVACUATED	
PERSONNEL EXPOSED OR CONTAMINATED		OFFSITE PROTECTIVE ACTIONS RECOMMENDED		*State release path in description		
	Release Rate (Ci/sec)	% T. S. LIMIT	HOO GUIDE	Total Activity (Ci)	% T. S. LIMIT	HOO GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid (excluding tritium and dissolved noble gases)			10 uCi/min			0.1 Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						
	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER	
RAD MONITOR READINGS						
ALARM SETPOINTS						
% T. S. LIMIT (if applicable)						
RCS OR SG TUBE LEAKS: CHECK OR FILL IN APPLICABLE ITEMS: (specific details/explanations should be covered in event description)						
LOCATION OF THE LEAK (e.g., SG #, valve, pipe, etc.)						
LEAK RATE	UNITS: gpm/gpd	T. S. LIMITS	SUDDEN OR LONG-TERM DEVELOPMENT			
LEAK START DATE	TIME	COOLANT ACTIVITY AND UNITS:	PRIMARY	SECONDARY		
LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL						
EVENT DESCRIPTION (Continued from front)						