

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

December 17, 2003

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Serial No. 03-494
NLOS/ETS
Docket Nos. 50-338/339
License Nos. NPF-4/7

VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)
NORTH ANNA POWER STATION UNITS 1 AND 2
REVISED REQUIRED ACTION COMPLETION TIME FOR
PROPOSED RISK-INFORMED TECHNICAL SPECIFICATIONS CHANGE
EXTENDED INVERTER ALLOWED OUTAGE TIME

In an December 13, 2002 letter (Serial No. 02-758), Dominion requested an amendment to Facility Operating License Numbers NPF-4 and NPF-7 in the form of a change to the Technical Specifications for North Anna Power Station Units 1 and 2. The proposed change would revise the Completion Time of Required Action A.1 of Technical Specification 3.8.7, Inverter-Operating, from 24 hours to 14 days for an inoperable inverter based on a risk-informed evaluation. In a September 11, 2003 telephone conversation with the NRC, the deterministic basis for the proposed Completion Time (CT) was discussed. Based on that telephone conversation, this letter revises the initial Technical Specification change request by reducing the proposed TS 3.8.7, Required Action A.1 Completion Time from 14 days to 7 days and includes compensatory measures during the extended Completion Time.

During the September 11, 2003 telephone conversation, the NRC informed Dominion that a deterministic approach to the proposed Completion Time for the AC inverters did not support 14 days. Specifically, the NRC staff stated that basing the requested Completion Time solely on the time necessary to address a catastrophic failure or planned online replacement of an inverter could not be justified in terms of routine outage allowance and event frequency. The NRC staff stated that an emergency Technical Specifications change was the appropriate licensing action to extend the Completion Time for a catastrophically failed inverter. However, the NRC Staff stated that the deterministic basis submitted in the December 13, 2002 letter did provide an adequate basis for a 7-day Completion Time, since the remainder of the corrective/preventative maintenance activities were routine in nature and were identified as being capable of being completed within 7 days. Therefore, Dominion is revising the proposed Technical Specification change to request a 7-day Required Action. In addition, the following compensatory measures will be implemented when an instrument bus inverter is unavailable:

- Entry into the extended inverter CT will not be planned concurrent with EDG maintenance, and

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- Entry into the extended inverter CT will not be planned concurrent with planned maintenance, with the exception of routine surveillance, on another RPS/ESFAS channel that results in that channel being in a tripped condition.

The basis of the proposed change and the associated supporting risk assessment provided in the December 13, 2002 letter (Serial No. 02-758) supplemented in a May 8, 2003 letter (Serial No. 02-758A) remain valid and bounding for the revised 7-day Required Action Completion Time for the inverters. A revised Technical Specification marked-up page and the Technical Specification page that incorporates the revised proposed change are provided in the attachment to this letter. Revised Technical Specification Bases changes are included for information only. In accordance with the Technical Specification Bases Control Program identified in Technical Specification 5.5.13, the Technical Specification Bases will be revised, following NRC approval of the license amendment.

The significant hazards determination and environmental assessment provided in the December 13, 2002 letter are unaffected by the revised Required Action Completion Time.

Dominion requests NRC approval of the proposed Technical Specification change by February 29, 2003. Once approved the amendment will be implemented within 30 days. Should you have any questions or require additional information, please contact Mr. Thomas Shaub at (804) 273-2763.

Very truly yours,



Leslie N. Hartz
Vice President - Nuclear Engineering

Attachment

Commitments made in this letter: None

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Attachment

**Revised Required Action Completion Time For
Proposed Risk-Informed Technical Specifications Change
Extended Inverter Allowed Outage Time**

**Virginia Electric and Power Company (Dominion)
North Anna Power Station Units 1 and 2**

3.8 „ ELECTRICAL POWER SYSTEMS

3.8.7 Inverters-Operating

LCO 3.8.7 The Train H and Train J inverters shall be OPERABLE.

----- NOTE -----
 One inverter may be disconnected from its associated DC bus for ≤ 24 hours to perform an equalizing charge on its associated battery, provided:

- a. The associated AC vital bus is energized from its constant voltage source transformer; and
- b. All other AC vital buses are energized from their associated OPERABLE inverters.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One inverter inoperable.	A.1 -----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems-Operating" with any vital bus de-energized. ----- Restore inverter to OPERABLE status.	24 hours <i>7 days</i>
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

BASES

- APPLICABILITY The inverters are required to be OPERABLE in MODES 1, 2, 3, and 4 to ensure that:
- a. Acceptable fuel design limits and reactor coolant pressure boundary limits are not exceeded as a result of AOOs or abnormal transients; and
 - b. Adequate core cooling is provided, and containment OPERABILITY and other vital functions are maintained in the event of a postulated DBA.

Inverter requirements for MODES 5 and 6 are covered in the Bases for LCO 3.8.8, "Inverters-Shutdown."

ACTIONS

A.1

With a required inverter inoperable, its associated AC vital bus becomes inoperable until it is re-energized from its constant voltage source transformer.

For this reason a Note has been included in Condition A requiring the entry into the Conditions and Required Actions of LCO 3.8.9, "Distribution Systems-Operating." This ensures that the vital bus is re-energized within 2 hours.

Required Action A.1 allows ^{7 days} 24 hours to fix ^{7 days} the inoperable inverter and return it to service. The 24-hour limit is based upon ^{a risk evaluation} engineering judgment, taking into consideration the time required to repair an inverter and the additional risk to which the unit is exposed because of the inverter inoperability. This has to be balanced against the risk of an immediate shutdown, along with the potential challenges to safety systems such a shutdown might entail. When the AC vital bus is powered from its constant voltage source, it is relying upon interruptible AC electrical power sources (offsite and onsite). The uninterruptible inverter source to the AC vital buses is the preferred source for powering instrumentation trip setpoint devices.

B.1 and B.2

If the inoperable devices or components cannot be restored to OPERABLE status within the required Completion Time, the unit must be brought to a MODE in which the LCO does not apply. To achieve this status, the unit must be brought to at
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----- NOTE -----
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-

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One inverter inoperable.	A.1 -----NOTE----- Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems-Operating" with any vital bus de-energized. ----- Restore inverter to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

BASES

APPLICABILITY

The inverters are required to be OPERABLE in MODES 1, 2, 3, and 4 to ensure that:

- a. Acceptable fuel design limits and reactor coolant pressure boundary limits are not exceeded as a result of AOs or abnormal transients; and
- b. Adequate core cooling is provided, and containment OPERABILITY and other vital functions are maintained in the event of a postulated DBA.

Inverter requirements for MODES 5 and 6 are covered in the Bases for LCO 3.8.8, "Inverters-Shutdown."

ACTIONS

A.1

With a required inverter inoperable, its associated AC vital bus becomes inoperable until it is re-energized from its constant voltage source transformer.

For this reason a Note has been included in Condition A requiring the entry into the Conditions and Required Actions of LCO 3.8.9, "Distribution Systems-Operating." This ensures that the vital bus is re-energized within 2 hours.

Required Action A.1 allows 7 days to fix the inoperable inverter and return it to service. The 7 day limit is based upon a risk evaluation, taking into consideration the time required to repair an inverter and the additional risk to which the unit is exposed because of the inverter inoperability. This has to be balanced against the risk of an immediate shutdown, along with the potential challenges to safety systems such a shutdown might entail. When the AC vital bus is powered from its constant voltage source, it is relying upon interruptible AC electrical power sources (offsite and onsite). The uninterruptible inverter source to the AC vital buses is the preferred source for powering instrumentation trip setpoint devices.

B.1 and B.2

If the inoperable devices or components cannot be restored to OPERABLE status within the required Completion Time, the unit must be brought to a MODE in which the LCO does not apply. To achieve this status, the unit must be brought to at
(continued)
