Attachment 1

Proposed Technical Specification Changes

North Anna Power Station Unit 1

Virginia Electric and Power Company

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and

b. Two independent diesel generators:

1. Each with a separate day tank containing a minimum of 750 gallons of fuel, and

2. A fuel storage system **consisting of two underground storage tanks each** containing a minimum of 45,000 gallons of fuel **(This is a shared system with Unit 2)**, and

3. A separate fuel transfer **system**.

APPLICABILITY: Modes 1, 2, 3 and 4.

ACTION:

a. With one offsite circuit of 3.8.1.1.a inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. If either EDG has not been successfully tested within the past 24 hours, demonstrate its OPERABILITY by performing Surveillance Requirement 4.8.1.1.2.a.4 separately for each such EDG within 24 hours. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

b. With one diesel generator of 3.8.1.1.b inoperable, demonstrate the OPERABILITY of the A.C. offsite power sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; and if the EDG became inoperable due to any cause other than preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE EDG by performing Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours*; restore the diesel generator to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

*This test is required to be completed regardless of when the inoperable EDG is restored to OPERABILITY.

ACTION (Continued):

f. With one underground fuel oil storage tank of 3.8.1.1.b.2 inoperable for the performance of Surveillance Requirement 4.8.1.1.4 or for tank repairs:

1. Verify 45,000 gallons of fuel is available in the operable underground fuel oil storage tank at least once per 12 hours,

2. Verify a minimum of 100,000 gallons of fuel oil is maintained in the above ground main fuel oil storage tank at least once per 12 hours,

3. Verify an available source of fuel oil and transportation to supply 50,000 gallons of fuel in less than a 48 hour period, and

4. Restore the storage tank to OPERABLE status within 7 days or place both Units in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

4.8.1.1.4 For each underground diesel generator fuel oil storage tank perform the following at least once per 10 years:

1. Drain each fuel oil storage tank
2. Remove sediment from each fuel oil storage tank
3. Inspect each fuel oil storage tank for integrity
4. Clean each fuel oil storage tank

ELECTRICAL POWER SYSTEMS

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and

b. One diesel generator with:

1. A day tank containing a minimum volume of 750 gallons of fuel,

2. A fuel storage system **consisting of two underground storage tanks each** containing a minimum volume of 45,000 gallons of fuel **(This is a shared system with Unit 2)**, and

3. A fuel transfer **system**.

APPLICABILITY: MODES 5 and 6.

ACTION:

a. With less than the above minimum required A.C. electrical power sources OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until the minimum required A.C. electrical power sources are restored to OPERABLE status.

b. With one underground fuel oil storage tank of 3.8.1.2.b.2 inoperable for the performance of Surveillance Requirement 4.8.1.1.4 or for tank repairs:

1. Verify 45,000 gallons of fuel is available in the operable underground fuel oil storage tank at least once per 12 hours,

2. Verify a minimum of 100,000 gallons of fuel oil is maintained in the above ground main fuel oil storage tank at least once per 12 hours,

3. Verify an available source of fuel oil and transportation to supply 50,000 gallons of fuel in less than a 48 hour period, and

4. Restore the storage tank to OPERABLE status within 7 days or place both Units in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours, and perform ACTION a, above.

SURVEILLANCE REQUIREMENTS

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the Surveillance Requirements of 4.8.1.1.1, 4.8.1.1.2, 4.8.1.1.3 and **4.8.1.1.4.**

Attachment 2

Proposed Technical Specification Changes

North Anna Power Station Unit 2

Virginia Electric and Power Company

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and

b. Two independent diesel generators:

1. Each with a separate day tank containing a minimum of 750 gallons of fuel, and

2. A fuel storage system **consisting of two underground storage tanks each** containing a minimum of 45,000 gallons of fuel **(This is a shared system with Unit 1)**, and

3. A separate fuel transfer **system**.

APPLICABILITY: Modes 1, 2, 3 and 4.

ACTION:

a. With one offsite circuit of 3.8.1.1.a inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. If either EDG has not been successfully tested within the past 24 hours, demonstrate its OPERABILITY by performing Surveillance Requirement 4.8.1.1.2.a.4 separately for each such EDG within 24 hours. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

b. With one diesel generator of 3.8.1.1.b inoperable, demonstrate the OPERABILITY of the A.C. offsite power sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; and if the EDG became inoperable due to any cause other than preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE EDG by performing Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours*; restore the diesel generator to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

*This test is required to be completed regardless of when the inoperable EDG is restored to OPERABILITY.

ACTION (Continued):

f. With one underground fuel oil storage tank of 3.8.1.1.b.2 inoperable for the performance of Surveillance Requirement 4.8.1.1.4 or for tank repairs:

1. Verify 45,000 gallons of fuel is available in the operable underground fuel oil storage tank at least once per 12 hours,

2. Verify a minimum of 100,000 gallons of fuel oil is maintained in the above ground main fuel oil storage tank at least once per 12 hours,

3. Verify an available source of fuel oil and transportation to supply 50,000 gallons of fuel in less than a 48 hour period, and

4. Restore the storage tank to OPERABLE status within 7 days or place both Units in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

4.8.1.1.3 (Continued)

c. At least once per 18 months by verifying that:

1. The cells, cell plates, and battery racks show no visual indication of physical damage or abnormal deterioration.

2. The cell-to-cell and terminal connections are clean, tight and coated with anti-corrosion material.

3. The resistance of each cell-to-cell and terminal connection is less than or equal to 150 x 10 -6 ohms.

4. The battery charger will supply at least ten amperes at 125 volts for at least 4 hours.

d. At least once per 60 months, during shutdown, by verifying that the battery capacity is atleast 80% of the manufacturer's rating when subjected to a performance discharge test.

e. At least once per 18 months, during shutdown, perform a performance discharge test of battery capacity if the battery shows signs of degradation or has reached 85% of its service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% of rated capacity from its average from previous performance discharge tests, or is below 90% of the manufacturer's rating.

4.8.1.1.4 For each underground diesel generator fuel oil storage tank perform the following at least once per 10 years:

1. Drain each fuel oil storage tank
2. Remove sediment from each fuel oil storage tank
3. Inspect each fuel oil storage tank for integrity
4. Clean each fuel oil storage tank

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and

b. One diesel generator with:

1. A day tank containing a minimum volume of 750 gallons of fuel,

2. A fuel storage system **consisting of two underground storage tanks each** containing a minimum volume of 45,000 gallons of fuel **(This is a shared system with Unit 1)**, and

3. A fuel transfer **system**.

APPLICABILITY: MODES 5 and 6.

ACTION:

a. With less than the above minimum required A.C. electrical power sources OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until the minimum required A.C. electrical power sources are restored to OPERABLE status.

b. With one underground fuel oil storage tank of 3.8.1.2.b.2 inoperable for the performance of Surveillance Requirement 4.8.1.1.4 or for tank repairs:

1. Verify 45,000 gallons of fuel is available in the operable fuel oil storage tank at least once per 12 hours,

2. Verify a minimum of 100,000 gallons of fuel oil is maintained in the above ground main fuel oil storage tank at least once per 12 hours,

3. Verify an available source of fuel oil and transportation to supply 50,000 gallons of fuel in less than a 48 hour period, and

4. Restore the storage tank to OPERABLE status within 7 days or place both Units in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours, and perform ACTION a, above.

SURVEILLANCE REQUIREMENTS

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the Surveillance Requirements of 4.8.1.1.1, 4.8.1.1.2, 4.8.1.1.3 and **4.8.1.1.4.**

Attachment 3

Discussion of Proposed Changes
North Anna Power Station Units 1 and 2

Virginia Electric and Power Company

Discussion of Proposed Technical Specification Changes

Introduction

The proposed changes to the North Anna Units 1 and 2 Technical Specification adds a surveillance requirement to clean and inspect the diesel fuel oil storage tanks and modifies the appropriate Action requirements in order to accommodate the new proposed surveillance requirement. In addition, the proposed change clarifies that the fuel storage system is a shared system.

The additional surveillance requirement will not reduce emergency diesel generator reliability. Rather, reliability will be enhanced from cleaning and inspection of the tanks.

Description of the Proposed Change

Two underground fuel oil storage tanks are available to provide sufficient fuel to operate two emergency diesel generators at full load for seven days in accordance with the design basis. They are missle-protected, seismic category I tanks. Each 50,000 gallon tank is fed by gravity from a 210,000 gallon above ground main fuel oil storage tank and can also be fed by emergency, seismic category I, tornado, missile, and flood protected truck fill line connections.

General industry experience has indicated that periodic cleaning and inspection of underground tanks is prudent. However, the tanks must be removed from service in order to perform periodic cleaning and/or inspection. The current action statements in Technical Specification 3.8.1.1 (modes 1 through 4) and Technical Specification 3.8.1.2 (modes 5 and 6) do not currently provide for removal of a tank from service.

The proposed change adds a surveillance requirement to clean and inspect the diesel fuel oil storage tanks at least once per 10 years. The appropriate Action requirement is also modified to allow for removal of the tank for up to 7 days for anticipated maintenance to the tank or associated components.

Provisions are established in the proposed change to ensure that with one tank out of service, a minimum of 100,000 gallons of fuel would be available from the above ground tank and arrangements would be made to ensure an additional 50,000 gallons of fuel oil could be delivered in less than a 48 hour period if required. This would ensure operation of the required two emergency diesel generators (one per unit) at full load for 7 days since the tank not removed from operation would provide fuel to operate the two emergency diesel generators for at least 3 1/2 days at full load and backup capabilities to refill the tank in this time frame are established.

Safety Analysis

The accident analyses are not affected by the proposed Technical Specification change. The emergency diesel generators are installed to provide an emergency source of power to vital equipment when the normal source(s) is not available. The accident analysis in the Updated Final Safety Analysis Report, Section 15.2.9, Loss of Offsite Power to the Station Auxiliaries (Station Blackout), includes automatic starting of the emergency diesel generators and sequenced loading of vital equipment. The replenishment fuel will ensure the same availability of the emergency diesel generators as with both underground fuel oil tanks in operation.

Discussion of Proposed Technical Specification Changes Cont'd.

In the event of an emergency requiring operation of the emergency diesel generators, work on the tank out of service would be stopped or completed as appropriate to properly return the tank to service in an expeditious manner. The above ground tank would be sampled and fuel would be transferred to the underground tank. Should the above ground tank become inoperable simultaneously with the emergency diesel generator demand event, fuel would be transported from the prearranged source to the operable underground tank(s).

Attachment 4

10 CFR 50.92 Evaluation

North Anna Power Station Units 1 and 2

Virginia Electric and Power Company

Basis for No Significant Hazards Determination

The proposed change does not involve a significant hazards consideration as defined in 10 CFR 50.92 because operation of North Anna Units 1 and 2 in accordance with this change would not:

(1) involve a significant increase in the probability or consequence of an accident previously evaluated. This change does not alter the conditions or assumptions of the accident analysis or the basis of the current Technical Specification. The consequence of a diesel generator failure is unchanged. Fuel oil would be available to supply one diesel generator per unit enough fuel to meet the requirement for full-load operation for 7 days.

(2) create the possibility of a new or different kind of accident from any accident previously identified. This change does not alter the conditions or assumptions of the accident analysis or the basis of the current Technical Specification. This is not a hardware change.

(3) involve a significant reduction in a margin of safety. This change does not alter the conditions or assumptions of the accident analysis of the basis of the current Technical Specification. It is not an actual hardware change.

Therefore, pursuant to 10 CFR 50.92, based on the above considerations, it has been determined that this change does not involve a significant hazards consideration.

Attachment 5

Markup of the North Anna MERITS Technical Specifications

Virginia Electric and Power Company

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Two required offsite circuits inoperable.	E.1 ---------NOTES--------- 1. Only required if diesel generator is not operating. 2. Only required for a diesel generator if not successfully completed within past 24 hours. ---------- Perform SR 3.7.1.5 for both diesel generators.	8 hours
	AND	
	E.2 Restore one required offsite circuit to OPERABLE status.	24 hours
F. One loss of voltage trip device channel inoperable.	----------NOTE---------- Channel may be bypassed for up to 4 hours for surveillance testing of other channels. ---------- F.1 Place channel in trip condition.	6 hours
G. One degraded voltage trip device channel inoperable.	--------NOTE---------- Channel may be bypassed for up to 4 hours for surveillance testing of other channels. ---------- G.1 Place channel in trip condition.	6 hours

INSERT (A) ⇒

(continued)

INSERT A

CONDITION	REQUIRED ACTION	COMPLETION TIME
H. One fuel oil storage tank inoperable for the performance of S.R. 3.7.1.35 or for tank repairs.	H.1 Perform S.R. 3.7.1.3 for operable fuel oil storage tank.	Once per 12 hours
AND	**AND**	
A source of fuel oil and transportation to supply 50,000 gallons of fuel within 48 hours is available.	H.2 Verify ≥ 100,000 gallons of fuel oil is maintained in the above ground main fuel oil storage tank	Once per 12 hours
	AND	
	H.3 Restore the storage tank to **OPERABLE** status.	7 days
I. Required actions of Condition H not met within required completion time.	I.1 Place both Units in **HOT STANDBY**	6 hours
	AND	
	I.2 Place both Units in **COLD SHUTDOWN**	36 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
J. Required Actions of Conditions A, B, C, D, E, F, or G not met within required Completion Times.	H.1 Be in MODE 3. AND H.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.1.1	Verify correct breaker alignment and indicated power availability for each required offsite circuit.	7 days
SR 3.7.1.2	Verify each fuel oil day tank contains ≥ 750 gallons of fuel oil.	Table 3.7.1-1 as required by D/G frequency
SR 3.7.1.3	Verify EACH fuel oil storage tanks contain ≥ 45,000 gallons of fuel oil. ~~for each diesel generator.~~	31 days
SR 3.7.1.4	Verify each fuel oil transfer pump starts and transfers fuel oil from the storage tanks to the day tanks.	31 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.7.1.34	----------NOTE---------- All diesel generator starts may be preceded by warmup and prelube procedures as recommended by the manufacturer, including manufacturer's loading recommendations for warmup. ---------- Start both diesel generators simultaneously and verify the following voltage and frequency are achieved in ≤ 10 seconds: a. Voltage ≥ 3740 and ≤ 4580 volts, and b. Frequency ≥ 58.8 and ≤ 61.2 Hz.	10 years AND After modifications which could affect diesel generator inter-dependence
SR 3.7.1.35	For the fuel oil system: a. Drain each fuel oil storage tank, b. Remove sediment from storage tank, and c. Clean storage tank ~~using a sodium hypochlorite or equivalent solution~~.	10 years

EACH fuel oil
EACH fuel oil

c. Inspect EACH fuel oil storage TANK for integrity, and

CROSS-REFERENCES - None.

3.7 ELECTRICAL POWER SYSTEMS

3.7.2 AC Sources - Shutdown

LCO 3.7.2 The AC electrical power sources shall be OPERABLE with:

a. One circuit between the offsite transmission network and the onsite safety-related distribution system, and

b. One diesel generator.

APPLICABILITY: MODES 5 and 6,
During movement of irradiated fuel
During crane operation over irradiated fuel assemblies

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. ~~LCO not met.~~ ONE OR MORE REQUIRED AC POWER SOURCES INOPERABLE.	----------NOTE---------- Suspension of A.1, A.2, and A.3 activities shall not preclude completion of actions to establish a safe conservative condition. ----------		
	A.1	Suspend CORE ALTERATIONS.	15 minutes
	AND		
	A.2	Suspend movement of irradiated fuel.	15 minutes
	AND		
	A.3	Suspend crane operations over spent fuel pool.	15 minutes
	AND		
		(continued)	

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.4 Suspend operations with a potential for draining the reactor vessel.	15 minutes
	AND	
	A.5 Suspend operations involving positive reactivity additions.	15 minutes
	AND	
	A.6.1 Initiate action to restore required AC electrical power sources.	15 minutes
	AND	
	A.6.2 Continue action to restore required AC electrical power sources.	Until required AC electrical power sources restored

Insert B

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.2.1 Perform: SR 3.7.1.1 through SR 3.7.1.5, SR 3.7.1.7 through SR 3.7.1.15, (continued)	As specified by applicable SRs

INSERT B

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One fuel oil storage tank inoperable for the performance of S.R. 3.7.1.35 or for tank repairs.	B.1 Perform S.R. 3.7.1.3 for operable fuel oil storage tank.	Once per 12 hours
AND	**AND**	
A source of fuel oil and transportation to supply 50,000 gallons of fuel within 48 hours is available.	B.2 Verify ≥ 100,000 gallons of fuel oil is maintained in the above ground main fuel oil storage tank	Once per 12 hours
	AND	
	B.3 Restore the storage tank to **OPERABLE** status.	7 days
C. Required actions of Condition H not met within required completion time.	C.1 Place both Units in **HOT STANDBY**	6 hours
	AND	
	C.2.1 Place both Units in **COLD SHUTDOWN**	36 hours
	AND	
	C.2.2 Perform required actions of condition A.	Immediately