

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATIONS CHANGES

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PLANT SYSTEMS

3/4.7.14 FIRE SUPPRESSION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.14.1 The fire suppression water system shall be OPERABLE with:

- a. Two high pressure pumps, each with a capacity of 2500 gpm, with their discharge aligned to the fire suppression header,
- b. Separate water supplies from the North Anna Reservoir and the Service Water Reservoir, and
- c. An OPERABLE flow path capable of taking suction from the North Anna Reservoir and the Service Water Reservoir and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves and the valve at each hose standpipe as required to be OPERABLE per Specification 3.7.14.5.

APPLICABILITY: At all times.

ACTION:

- a. With one pump and/or one water supply inoperable, restore the inoperable equipment to OPERABLE status within 7 days or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.
- b. With only the diesel driven fire pump inoperable for performance of the diesel engine inspection required by Specification 4.7.14.1.2.c, establish and demonstrate operability of a backup fire suppression system within 24 hours. If the diesel driven fire pump is not restored to OPERABLE status within 7 days, ACTION "a" applies.
- c. With the fire suppression water system otherwise inoperable:
 1. Establish a backup fire suppression water system within 24 hours, and
 2. Submit a Special Report in accordance with Specification 6.9.2:
 - a) By telephone within 24 hours,
 - b) Confirmed by telegraph, mailgram or facsimile transmission no later than the first working day following the event, and

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- g. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association.

4.7.14.1.2 The fire pump diesel engine shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying:
 - 1. The fuel storage tank contains at least 220 gallons of fuel, and
 - 2. The diesel starts from ambient conditions and operates for at least 30 minutes on recirculation flow.
- b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank is within acceptable limits specified in Table 1 of ASTM D375-74 when checked for viscosity, water and sediment.
- c. At least once per 18 months by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service. The actions required by ACTION "b" of Specification 3.7.14.1 shall be followed in performing this inspection.

4.7.14.1.3 The fire pump diesel starting 24-volt battery bank and charger shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that:
 - 1. The electrolyte level of each battery is above the plates, and
 - 2. The overall battery voltage is ≥ 24 volts.
- b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.

PLANT SYSTEMS

3/4.7.14 FIRE SUPPRESSION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.14.1 The fire suppression water system shall be OPERABLE with:

- a. Two high pressure pumps, each with a capacity of 2500 gpm, with their discharge aligned to the fire suppression header,
- b. Separate water supplies from the North Anna Reservoir and the Service Water Reservoir, and
- c. An OPERABLE flow path capable of taking suction from the North Anna Reservoir and the Service Water Reservoir and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves and the valve at each hose standpipe as required to be OPERABLE per Specification 3.7.14.5.

APPLICABILITY: At all times.

ACTION:

- a. With one pump and/or one water supply inoperable, restore the inoperable equipment to OPERABLE status within 7 days or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.
- b. With only the diesel driven fire pump inoperable for performance of the diesel engine inspection required by Specification 4.7.14.1.2.c, establish and demonstrate operability of a backup fire suppression system within 24 hours. If the diesel driven fire pump is not restored to OPERABLE status within 7 days, ACTION "a" applies.
- c. With the fire suppression water system otherwise inoperable:
 1. Establish a backup fire suppression water system within 24 hours, and
 2. Submit a Special Report in accordance with Specification 6.9.2:
 - a) By telephone within 24 hours,
 - b) Confirmed by telegraph, mailgram or facsimile transmission no later than the first working day following the event, and

PLANT SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

- c. In writing within 14 days following the event, outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.7.14.1.1 The fire suppression water system shall be demonstrated OPERABLE:*

- a. By verifying the contained water supply volumes pursuant to Specification 4.7.5.1.
- b. At least once per 31 days on a STAGGERED TEST BASIS by starting each electric motor driven pump and operating it for at least 15 minutes on recirculation flow.
- c. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path is in its correct position.
- d. By performance of a system flush as necessary to maintain the system water chemistry within acceptable limits.
- e. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
- f. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:
 1. Verifying that each automatic valve in the flow path actuates to its correct position,
 2. Verifying that each pump develops at least 2500 gpm at a system head of greater than or equal to 250 feet for 1-FP-P-1 and greater than or equal to 187 feet for 1-FP-P-2.
 3. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel, and
 4. Verifying that each high pressure pump starts (sequentially) to maintain the fire suppression water system pressure greater than or equal to 80 psig in the main fire loop.

*The fire suppression system is common to North Anna Unit 1. The surveillances need only be performed once per defined interval to demonstrate operability for both units.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- g. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association.
- 4.7.14.1.2 The fire pump diesel engine shall be demonstrated OPERABLE:*
- a. At least once per 31 days by verifying:
1. The fuel storage tank contains at least 220 gallons of fuel, and
 2. The diesel starts from ambient conditions and operates for at least 30 minutes on recirculation flow.
- b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank is within acceptable limits specified in Table 1 of ASTM D975-74 when checked for viscosity, water and sediment.
- c. At least once per 18 months by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service. The actions required by ACTION "b" of Specification 3.7.14.1 shall be followed in performing this inspection.
- 4.7.14.1.3 The fire pump diesel starting 24-volt battery bank and charger shall be demonstrated OPERABLE:*
- a. At least once per 7 days by verifying that:
1. The electrolyte level of each battery is above the plates, and
 2. The overall battery voltage is ≥ 24 volts.
- b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.

*The fire suppression system is common to North Anna Unit 1. The surveillances need only be performed once per defined interval to demonstrate operability for both units.

WEAR & A
Traction Bond

25% COTTON FIBRE

ATTACHMENT 2

DISCUSSION AND SIGNIFICANT
HAZARDS CONSIDERATIONS EVALUATION

DISCUSSION

The fire suppression system for the North Anna Power Station includes two high pressure fire water pumps, one motor-driven and the other diesel engine driven. This suppression system is shared by both units. Currently, Technical Specification 4.7.14.1.2.c requires that an inspection of the diesel engine be performed at least once per 18 months, during shutdown, in accordance with procedures prepared in conjunction with the engine manufacturer's recommendations. The proposed changes would continue to require an inspection at least once per 18 months, but would eliminate the restriction that the inspection be performed "during shutdown." Instead, the proposed changes allow the 18 month inspection to be carried out with both units operating, but would require that a backup fire suppression water system be established and demonstrated operable within 24 hours of removing the diesel engine driven fire pump from service for the purpose of performing this inspection. In the event that the diesel engine is not returned to operable status within 7 days, the proposed change imposes the requirement to submit a Special Report as called for by T.S. 3.7.14.1 ACTION "a."

The proposed changes are requested in order to eliminate the ambiguity of the "during shutdown" clause which is not specific as to whether one or both units must be shutdown, and allow flexibility with respect to the timing of the 18-month inspection while retaining the degree of fire suppression system redundancy appropriate for the operational status of the units. Although the 18-month inspection of the fire pump diesel engine will normally be performed during a unit outage, the flexibility afforded by the proposed change would eliminate the need to 1) extend the surveillance interval beyond that allowed by Technical Specifications, or 2) shut down one or both units in the event of unforeseen changes to the outage schedules for both units.

Virginia Electric and Power Company has to date interpreted the clause "during shutdown" to mean that only one unit is required to be shutdown during the performance of the 18-month diesel engine inspection. This interpretation was based on our understanding that the purpose of the shutdown clause was to reduce the nuclear safety risk associated with a fire, while the diesel fire pump was unavailable, to the extent practicable given the approved fire suppression system design. That is, the increased risk associated with removing the diesel driven fire pump from service for the purpose of performing a comprehensive inspection was balanced by the decrease in risk associated with having one unit in a shutdown condition. Furthermore, when the diesel driven fire pump was removed from service for the purpose of performing the 18-month inspection, ACTION STATEMENT "a" of T.S. 3.7.14.1 was applied. This ACTION STATEMENT required that the inoperable equipment (in this case, the diesel driven fire pump) be restored to operable status within 7 days or we would have to submit a Special Report to the NRC within the next 30 days outlining the plans and procedures to be used to provide the loss of redundancy in this system. The 18-month diesel engine inspection has been routinely completed and the fire pump returned to service within 7 days.

With the proposed changes, the increased risk associated with removing the diesel driven fire pump from service to perform the 18-month inspection while both units are operating would be offset by requiring the restoration of the

same degree of redundancy that exists when both the motor and diesel driven fire pumps are operable. This is accomplished by the proposed requirement to have the motor driven fire pump and a backup fire suppression system (which includes pumps) operable. Also, a Special Report to the Commission would be required if the diesel driven fire pump is not restored to operable status within 7 days. Note that the proposed changes allow the diesel driven fire pump to be removed from service for the 18-month surveillance only if the motor driven fire pump is operable. With the diesel driven pump removed from service for the 18-month inspection, ACTION STATEMENT "c" of LCO 3.7.14.1 would apply in the event that the motor driven fire pump became inoperable. Furthermore, since the fire pump diesel engine has been recently replaced with a new engine, future inspections can reasonably be assumed to continue to be completed and the diesel driven fire pump restored to operable status within 7 days.

Footnotes are being added to the surveillance requirements for the Unit 2 Specifications 4.7.14.1.1, 4.7.14.1.2, and 4.7.14.1.3 to clarify that the surveillances need only to be performed once per interval to satisfy both units' surveillance requirements since the fire suppression system is common to both units. Presently, both units' specifications include the same requirements. Finally, a typo is being corrected in ACTION "a" of 3.7.14.1 for both units.

Basis for No Significant Hazards Determination

The proposed changes do not involve a significant hazards consideration 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 consequences of an accident previously evaluated;

The proposed changes will maintain the same balance of risk associated with removing the diesel driven fire pump from service for the 18-month engine inspection that is maintained by the current Technical Specification 3/4.7.14. Accordingly, the probability of previously evaluated accidents will remain unchanged. Similarly, the consequences of previously evaluated accidents will remain unchanged since the proposed changes result in the same degree of fire suppression system capability as is currently required. Therefore, the proposed changes do not involve any increase in the probability or consequences of an accident previously evaluated.

- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated;

The proposed changes deal with the establishment of the degree of fire suppression system redundancy (and therefore capability) appropriate for the operating status of the units during those periods when the diesel driven fire pump is removed from service for a specific inspection. The proposed change does not add or delete equipment which could cause a fire or be used to mitigate the effects of a fire. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3) Involve a significant reduction in a margin of safety;

The existing margin of safety is defined by the current requirement, as interpreted by the Company, to have at least one unit shutdown and an operable electric motor driven fire pump when performing the 18-month fire pump diesel engine inspection. The proposed changes would maintain this same margin of safety by requiring that both the motor driven fire pump and a backup fire suppression system be operable whenever the 18-month diesel engine inspection is performed. Therefore, the proposed changes do not involve any reduction in the margin of safety.

Based on the above, the proposed changes do not involve a significant hazards consideration as defined in 10CFR50.92.