

ATTACHMENT 1

PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS
AND NEW PROPOSED LICENSE CONDITION

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PROPOSED

LICENSE CONDITION

SECONDARY WATER CHEMISTRY MONITORING

2.9.(3) The licensee shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program includes:

1. Identification of a sampling schedule for the critical parameters and of control points for these parameters;
2. Identification of the procedures used to measure the value of the critical parameters;
3. Identification of process sampling points;
4. Procedure for the recording and management of data;
5. Procedures defining corrective actions for off-control point chemistry conditions; and
6. A procedure identifying (1) the authority responsible for the interpretation of the data and (2) the sequence and timing of administrative events required to initiate corrective action.

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PLANT SYSTEMS

SECONDARY WATER CHEMISTRY

LIMITING CONDITION FOR OPERATION

3.7.1.6 The secondary water chemistry shall be maintained within the limits of Table 3.7-3.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

(To be determined in the manner set forth in the bases in approximately six months and to be imposed by a change to this Specification)

SURVEILLANCE REQUIREMENTS

4.7.1.6 The secondary water chemistry shall be determined to be within the limits by analysis of those parameters at the frequencies specified in Table 4.7-2.

[DELETE]

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NORTH ANNA - UNIT 1

3/4 7-12

TABLE 3.7-3

SECONDARY WATER CHEMISTRY LIMITS

Water Sample
Location

*

Parameters*

*

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*Sample locations, parameters and limits to be established in approximately 6 months following issuance of the full power license based upon test program described in bases.

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NORTH ANNA - UNIT 1

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TABLE 4.7-2

SECONDARY WATER CHEMISTRY SURVEILLANCE REQUIREMENTS

Water Sample
Location

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Parameters*

*

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*Sample locations, parameters and limits to be established in approximately 6 months following issuance of the full power license based upon test program described in bases.

PLANT SYSTEMS

STEAM TURBINE ASSEMBLY

LIMITING CONDITION FOR OPERATION

- 3.7.1^{.6} The structural integrity of the steam turbine assembly shall be maintained.

APPLICABILITY: MODES 1 and 2

ACTION: With the structural integrity of the steam turbine assembly not conforming to the above requirement restore the structural integrity of the steam turbine prior to placing it in service.

SURVEILLANCE REQUIREMENTS

- 4.7.1.7 The structural integrity of the steam turbine assembly shall be demonstrated;
- a. At least once per 40 months, during shutdown, by a visual and surface inspection of the steam turbine assembly at all accessible locations, and
 - b. At least once per 10 years, during shutdown, by disassembly of the turbine and performing a visual, surface and volumetric inspection of all normally inaccessible parts.

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PLANT SYSTEMS

TURBINE OVERSPEED

LIMITING CONDITION FOR OPERATION

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3.7.1.⁷~~8~~ At least one turbine overspeed protection system shall be OPERABLE.

APPLICABILITY: MODE 1, 2 and 3

ACTION: With the above required turbine overspeed protection system inoperable, within 6 hours either restore the system to OPERABLE status or isolate the turbine from the steam supply.

SURVEILLANCE REQUIREMENT

4.7.1.8.1 The provisions of Specification 4.0.4 are not applicable.

4.7.1.8.2 The above required turbine overspeed protection system shall be demonstrated OPERABLE;

- a. At least once per 7 days by cycling each of the following valves through one complete cycle.
 1. 4 Turbine Throttle valves
 2. 4 Turbine Governor valves
 3. 4 Turbine Reheat Stop valves
 4. 4 Turbine Reheat Intercept valves
- b. At least once per 31 days by direct observation of the movement of each of the above valves through one complete cycle.
- c. At least once per 18 months, by performance of CHANNEL CALIBRATION on the turbine overspeed protection instruments.
- d. At least once per 40 months, by disassembly of at least one of each of the above valves and performing a visual and surface inspection of all valve seats, disks and stems and verifying no unacceptable flaws or corrosion.

POOR ORIGINALPLANT SYSTEMSBASES

available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F when the Residual Heat Removal System may be placed into operation.

3/4.7.1.3 EMERGENCY CONDENSATE STORAGE TANK

The OPERABILITY of the emergency condensate storage tank with the minimum water volume ensures that sufficient water is available to maintain the RCS at HOT STANDBY conditions for 8 hours with steam discharge to the atmosphere concurrent with total loss of off-site power. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.

3/4.7.1.4 ACTIVITY

The limitations on secondary system specific activity ensure that the resultant off-site radiation dose will be limited to a small fraction of 10 CFR Part 100 limits in the event of a steam line rupture. This dose also includes the effects of a coincident 1.0 GPM primary to secondary tube leak in the steam generator of the affected steam line. These values are consistent with the assumptions used in the accident analyses.

3/4.7.1.5 MAIN STEAM TRIP VALVES

The OPERABILITY of the main steam trip valves ensures that no more than one steam generator will blowdown in the event of a steam line rupture. This restriction is required to 1) minimize the positive reactivity effects of the Reactor Coolant System cooldown associated with the blowdown, and 2) limit the pressure rise within containment in the event the steam line rupture occurs within containment. The OPERABILITY of the main steam trip valves within the closure times of the surveillance requirements are consistent with the assumptions used in the accident analyses.

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PLANT SYSTEMS

BASES

3/4.1.7 and 3/4.7.1.2 STEAM TURBINE and OVERSPEED PROTECTION

The turbine generator at the North Anna facility is arranged in a nonpeninsular orientation. Analysis has shown that this arrangement is such that if a turbine failure occurs as a result of destructive overspeed, potentially damaging missiles could impact the auxiliary building, containment, control room and other structures housing safety related equipment. The requirements of these two specifications provide additional assurance that the facility will not be operated with degraded valve performance and/or flawed turbine material which are the major contributors to turbine failures.

3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION

The limitation on steam generator pressure and temperature ensures that the pressure induced stresses in the steam generators do not exceed the maximum allowable fracture toughness stress limits. The limitations of 70°F and 200 psig are based on average steam generator impact values at 10°F and are sufficient to prevent brittle fracture.

3/4.7.3 COMPONENT COOLING WATER SUBSYSTEM

The OPERABILITY of the component cooling water system ensures that sufficient cooling capacity is available for continued operation of safety related equipment during normal and accident conditions.

3/4.7.4 SERVICE WATER SYSTEM

The OPERABILITY of the service water system ensures that sufficient cooling capacity is available for continued operation of safety related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the accident conditions within acceptable limits.

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North Anna Power Station Units 1 and 2
Secondary Water Chemistry Monitoring Program Summary

Each steam generator blowdown line as well as the feedwater header will be sampled at least every 72 hours. As an alternative, the steam generator surface liquid can be sampled if blowdown is unavailable. Each sample will be analyzed for cation conductivity. Each steam generator sample will be considered acceptable if the steady state cation conductivity is $\leq 2 \mu\text{ mhos/cm}$ at 25°C and each feedwater sample will be considered acceptable if the steady state cation conductivity is $\leq 1 \mu\text{ mho/cm}$ at 25°C . In addition, a transient limit of $\leq 7 \mu\text{ mhos/cm}$ at 25°C for steam generator samples and a transient limit of $\leq 3 \mu\text{ mhos/cm}$ at 25°C for feedwater samples will be established. If the test results indicate the cation conductivity is greater than steady state but less than transient specification, samples will be taken daily to insure it is trending downward and it is within the steady state specification in 14 days. If, after 14 days, it is still greater than the steady state specification, the plant must be in Hot Standby within 12 hours. If the cation conductivity exceeds its transient limit and is not trending downward, it must be restored within 72 hours or the plant must be in Hot Standby within the next 12 hours.

Chemistry personnel using approved chemistry procedures will perform all analyses and record the results. The samples are passed through a hydrogen form cation resin column to enhance the ability to read very low levels of conductivity. If the results are out of specification they will immediately notify the Shift Supervisor. In addition, the chemistry supervisor will periodically review the tabulated data for trends.

Returning out of specification chemistry to acceptable levels may require different actions to include, but not be limited to, blowdowns and secondary system cleanup. The action taken in any case will depend on the cause and the existing trend in parameter measurement.

This program may be amended by the Station Nuclear Safety and Operating Committee, as deemed necessary, to maintain plant operational flexibility and Secondary Water Chemistry Controls consistent with the intent of the program. The requirements of the program will be met via the Periodic Test Program. This will provide an established system for procedure approval, scheduling and performance.

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