ENCLOSURE 2

SALEM UNIT 2

REVISIONS TO TURBINE VALVE TEST FREQUENCY

TECHNICAL SPECIFICATION REVISIONS

## 3/4.3.4 TURBINE OVERSPEED PROTECTION

### LIMITING CONDITION FOR OPERATION

3.3.4 At least one turbine overspeed protection system shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With one stop valve or one control valve per high pressure turbine steam lead inoperable and/or with one reheat stop valve or one reheat intercept valve per low pressure turbine steam lead inoperable, restore the inoperable valve(s) to OPERABLE status within 72 hours or close at least one valve in the affected steam lead; otherwise, isolate the turbine from the steam supply within the next 6 hours.

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

### SURVEILLANCE REQUIREMENTS

4.3.4.1 The provisions of Specification 4.0.4 are not applicable.

4.3.4.2 The above required turbine overspeed protection system shall be demonstrated OPERABLE; (1) prior to admitting steam to the turbine during each startup unless performed within the past 7 days, (2) within 24 hours of attaining greater than or equal to 85% of RATED THERMAL POWER, and (3) at a frequency not to exceed one year* by direct observation of the movement of each of the following valves through at least one complete cycle from the running position.

a. Four high pressure turbine stop valves.
b. Four high pressure turbine control valves.
c. Six low pressure hot reheat stop valves.
d. Six low pressure hot reheat intercept valves.

* The above valves are to be tested at a frequency consistent with the methodology presented in WCAP-11525, "Probabilistic Evaluation of Reduction in Turbine Valve Test Frequency", and in accordance with the established NRC acceptance criteria for the probability of a missile ejection incident of $1.0 \times 10^{-5}$ per year, in no case shall the test interval for the above valves exceed one year.

4.3.4.3 The above referenced turbine overspeed protection system shall be demonstrated OPERABLE:

a. At least once per 18 months by performance of a CHANNEL CALIBRATION on the turbine overspeed protection systems.

b. At least once per 40 months by disassembly at least one of each of the above valves and performing a visual and surface inspection of valve seats, disks and steams and verifying no unacceptable flaws or corrosion.

4.3.4.4 Verify the test frequency maintains the probability of a missile ejection incident within NRC guidelines by reviewing the methodology presented in WCAP-11525:

a. At least once every two refueling outages.

b. After modifications to the main turbine or turbine overspeed protection valves.

3.4.3.3.8 RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

The radioactive liquid effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluents during actual or potential releases of liquid effluents. The alarm/trip setpoints for these instruments shall be calculated and adjusted in accordance with the procedures in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63 and 64 of Appendix A to 10 CFR Part 50. The purpose of tank level indicating devices is to assure the detection and control of leaks that if not controlled could potentially result in the transport of radioactive materials to UNRESTRICTED AREAS.

3/4.3.3.9 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

The radioactive gaseous effluent instrumentation is provided to monitor and control as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases of gaseous effluents. The alarm/trip setpoints for these instruments shall be calculated and adjusted in accordance with the procedures in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. This instrumentation also includes provisions for monitoring (and controlling) the concentrations of potentially explosive gas mixtures in the waste gas holdup system. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63 and 64 of Appendix A to 10 CFR Part 50.

3/4.3.4 TURBINE OVERSPEED PROTECTION

This specification is provided to ensure that the turbine overspeed protection instrumentation and the turbine speed control valves are OPERABLE and will protect the turbine from excessive overspeed. Protection from turbine excessive overspeed is required since excessive overspeed of the turbine could generate potentially damaging missiles which could impact and damage safety-related components, equipment or structures.

To prevent double shocking the turbine, valve testing is not required when steam is being admitted to the turbine and THERMAL POWER is less than 85% of RATED THERMAL POWER, provided the valves are tested prior to startup and within 24 hours of attaining 85% of RATED THERMAL POWER.

During normal power operation, turbine valve testing is performed at a frequency consistent with the methodology presented in WCAP-11525, "Probabilistic Evaluation of Reduction in Turbine Valve Test Frequency." This report evaluates the contribution of failure or unavailability of the turbine valve safety function to the probability that the turbine will overspeed and eject a missile. It concludes that extended intervals between turbine valve functional tests can be achieved without exceeding the NRC acceptance criteria for the probability of a turbine missile ejection incident. Factors which affect the selected valve test interval include low pressure turbine rotor type and inspection interval; turbine valve type, arrangement and overspeed controls; and secondary side water chemistry.

ENCLOSURE 3

SALEM UNIT 1

ADDITION OF TURBINE VALVE TEST FREQUENCY

TECHNICAL SPECIFICATIONS

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LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS


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## 3/4.3.4 TURBINE OVERSPEED PROTECTION

### LIMITING CONDITION FOR OPERATION

3.3.4 At least one turbine overspeed protection system shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

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

### SURVEILLANCE REQUIREMENTS

4.3.4.1 The provisions of Specification 4.0.4 are not applicable.

4.3.4.2 The above required turbine overspeed protection system shall be demonstrated OPERABLE; (1) prior to admitting steam to the turbine during each startup unless performed within the past 7 days, (2) within 24 hours of attaining greater than or equal to 85% of RATED THERMAL POWER, and (3) at a frequency not to exceed one year* by direct observation of the movement of each of the following valves through at least one complete cycle from the running position.

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c. Six low pressure hot reheat stop valves.
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SURVEILLANCE REQUIREMENTS (Continued)

4.3.4.3 The above referenced turbine overspeed protection system shall be demonstrated OPERABLE:

a. At least once per 18 months by performance of a CHANNEL CALIBRATION on the turbine overspeed protection systems.

b. At least once per 40 months by disassembly at least one of each of the above valves and performing a visual and surface inspection of valve seats, disks and steams and verifying no unacceptable flaws or corrosion.

4.3.4.4 Verify the test frequency maintains the probability of a missile ejection incident within NRC guidelines by reviewing the methodology presented in WCAP-11525:

a. At least once every two refueling outages.

b. After modifications to the main turbine or turbine overspeed protection valves.

## 3/4.3.4 TURBINE OVERSPEED PROTECTION

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