ATTACHMENT 2

REF: LR-N95081
LCR 95-08
LCR 85-18

MARKED-UP TECHNICAL SPECIFICATION PAGES

LICENSE AMENDMENT APPLICATION
SALEM GENERATING STATION - UNIT NOS. 1 AND 2
FACILITY OPERATING LICENSES DPR-70 AND DPR-75
DOCKET NOS. 50-272 AND 50-311

The following Technical Specification pages have been revised to reflect the proposed changes:

UNIT 1

3/4 4-3b
3/4 4-3c
3/4 9-8a
B 3/4 4-1
B 3/4 9-2

UNIT 2

3/4 4-4a
3/4 4-4b
3/4 9-9
B 3/4 4-1
B 3/4 9-2

REACTOR COOLANT SYSTEM

COLD SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.1.4 Two# residual heat removal loops shall be OPERABLE* and at least one RHR loop shall be in operation.**

APPLICABILITY: MODE 5.##

ACTION:

a. With less than the above required loops operable, immediately initiate corrective action to return the required loops to OPERABLE status as soon as possible.

b. With no RHR loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required RHR loop to operation.

SURVEILLANCE REQUIREMENTS

4.4.1.4 At least one residual heat removal loop shall be verified to be in operation and circulating reactor coolant at least once per 12 hours.

One RHR loop may be inoperable for up to two hours for surveillance testing, provided the other RHR loop is OPERABLE and in operation. Additionally, four filled reactor coolant loops, with at least two steam generators with their secondary side water levels greater than or equal to 5% (narrow range), may be substituted for one residual heat removal loop.

A reactor coolant pump shall not be started with one or more of the RCS cold leg temperatures less than or equal to 312°F unless 1) the pressurizer water volume is less than 1650 cubic feet (equivalent to approximately 92% of level), or 2) the secondary water temperature of each steam generator is less than 50°F above each of the RCS cold leg temperatures.

* Systems supporting RHR loop operability may be excepted as follows:

a. The normal or emergency power source may be inoperable.

DELETE

b. ~~One service water header may be out of service provided the equipment listed in Table 3.4-3 is OPERABLE.~~

** The residual heat removal pumps may be de-energized for up to 2 hours provided 1) no operations are permitted that would cause dilution of the reactor coolant system boron concentration, and 2) core outlet temperature is maintained at least 10°F below saturation temperature.

TABLE 3.4-3

MINIMUM EQUIPMENT REQUIRED FOR DECAY HEAT REMOVAL WITH ONE SERVICE WITH HEADER OUT OF SERVICE

- Both Residual Heat Removal Pumps, Heat Exchangers, and associated redundant flowpaths
- Two Component Cooling Pumps, one Component Cooling Heat Exchanger with operable flowpaths to each RHR Heat Exchanger
- Two Service Water Pumps
- Two Safety Grade Pumps, in addition to the RHR pumps, capable of injecting makeup flow into the core (any combination of safety injection***, charging*** or containment spray pumps)

*** One of the available pumps may be administratively removed from service in order to comply with the requirements of Section 3.5.3 footnote (#) and 4.5.3.2, provided that the pump can be made operable within 15 minutes.

DELETE

REFUELING OPERATIONS

LOW WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.8.2 Two independent Residual Heat Removal (RHR) loops shall be OPERABLE.*

APPLICABILITY: MODE 6 when water level above the top of the reactor pressure vessel flange is less than 23 feet.

ACTION:

a. With less than the required RHR loops operable, immediately initiate corrective action to return the required RHR loops to OPERABLE status as soon as possible.

b. The provisions of Specification 3.0.3 are to applicable.

SURVEILLANCE REQUIREMENTS

4.9.8.2 The required Residual Heat Removal loops shall be determined OPERABLE per Specification 4.0.5.

* Systems supporting RHR loop operability may be excepted as follows:

a. The normal or emergency power source may be inoperable.

b. One service water header may be out of service provided the equipment listed in Table 3.4-3 is OPERABLE.

DELETE

3/4.4 REACTOR COOLANT SYSTEM

BASES

3/4.4.1 REACTOR COOLANT LOOPS AND COOLANT CIRCULATION

The plant is designed to operate with all reactor coolant loops in operation, and maintain DNBR above 1.30 during all normal operations and anticipated transients. In MODES 1 and 2 with less than all coolant loops in operation, this specification requires that the plant be in at least HOT STANDBY within 1 hour. In MODE 3, a single reactor coolant loop provides sufficient heat removal for removing decay heat; but, single failure considerations require all loops be in operation whenever the rod control system is energized and at least one loop be in operation when the rod control system is deenergized. In MODE 4, a single reactor coolant loop or RHR loop provides sufficient heat removal for removing decay heat; but, single failure considerations require that at least 2 loops be OPERABLE. Thus, if the reactor coolant loops are not OPERABLE, this specification requires that two RHR loops be OPERABLE. In MODE 5, single failure considerations require that two RHR loops be OPERABLE. The provisions of Sections 3.4.1.4 and 3.9.8.2 [paragraph (b) of footnote (*)] which permit one service water header to be out of service, are based on the following: 1.The period of time during which plant operations rely upon the provisions of this footnote shall be limited to a cumulative 45 days for any single outage, and 2. The Gas Turbine shall be operable, as a backup to the diesel generators, in the event of a loss of offsite power, to supply the applicable loads. The basis for OPERABILITY is one successful startup of the Gas Turbine no more than 14 days prior to the beginning of the Unit outage. The operation of one Reactor Coolant Pump or one RHR Pump provides adequate flow to ensure mixing, prevent stratification and produce gradual reactivity changes during Boron concentration reductions in the Reactor Coolant System. The reactivity change rate associated with Boron concentration reductions will, therefore, be within the capability of operator recognition and control. The restrictions on starting a Reactor Coolant Pump below P-7 with one or more RCS cold legs less than or equal to 312°F are provided to prevent RCS pressure transients, caused by energy additions from the secondary system, which could exceed the limits of Appendix G to 10CFR Part 50. The RCS will be protected against overpressure transients and will not exceed the limits of Appendix G by either (1) restricting the water volume in the pressurizer (thereby providing a volume into which the primary coolant can expand, or (2) by restricting the starting of Reactor Coolant Pumps to those times when secondary water temperature in each steam generator is less than 50°F above each of the RCS cold leg temperatures.

REPLACE WITH INSERT 1

INSERT 1

For support systems; Service Water (SW) and Component Cooling (CC), component redundancy is necessary to ensure no single active component failure will cause the loss of RHR. Therefore, two SW pumps and two CC pumps, powered from two different vital buses, must be operable. Note that one piping path of SW and CC is adequate if it supports both RHR loops.

3/4.9.6 MANIPULATOR CRANE

The OPERABILITY requirements for the manipulator cranes ensure that: 1) manipulator cranes will be used for movement of control rods and fuel assemblies, 2) each crane has sufficient load capacity to lift a control rod or fuel assembly, and 3) the core internals and pressure vessel are protected from excessive lifting force in the event they are inadvertently engaged during lifting operations.

3/4.9.7 CRANE TRAVEL - SPENT FUEL STORAGE BUILDING

The restriction on movement of loads in excess of the nominal weight of a fuel and control rod assembly and associated handling tool over other fuel assemblies in the storage pool ensures that in the event this load is dropped (1) the activity release will be limited to that contained in a single fuel assembly, and (2) any possible distortion of fuel in the storage racks will not result in a critical array. This assumption is consistent with the activity release assumed in the accident analyses.

3/4.9.8 RESIDUAL HEAT REMOVAL AND COOLANT CIRCULATION

The requirements that at least one residual heat removal loop be in operation ensures that (1) sufficient cooling capacity is available to remove decay heat and maintain the water in the reactor pressure vessel below 140°F as required during the REFUELING MODE, and (2) sufficient coolant circulation is maintained through the reactor core to minimize the effects of a boron dilution incident and prevent boron stratification. A minimum flow rate of 1000 gpm is required. Additional flow limitations are specified in plant procedures, with the design basis documented in the Salem UFSAR. These flow limitations address the concerns related to vortexing and air entrapment in the Residual Heat Removal system, and provide operational flexibility by adjusting the flow limitations based on time after shutdown. The requirement to have two RHR loops OPERABLE when there is less than 23 feet of water above the reactor vessel flange ensures that a single failure of the operating RHR loop will not result in a complete loss of residual heat removal capability. The provisions of Sections 3.4.1.4 and 3.9.8.2 [paragraph (b) of footnote (*)] which permit one service water header to be out of service, are based on the following:

1. The period of time during which plant operations rely upon the provisions of this footnote shall be limited to a cumulative 45 days for any single outage, and

2. The Gas Turbine shall be operable, as a backup to the diesel generators, in the event of a loss of offsite power, to supply the applicable loads. The basis for OPERABILITY is one successful startup of the Gas Turbine no more than 14 days prior to the beginning of the Unit outage.

REPLACE WITH INSERT 1

INSERT 1

For support systems; Service Water (SW) and Component Cooling (CC), component redundancy is necessary to ensure no single active component failure will cause the loss of RHR. Therefore, two SW pumps and two CC pumps, powered from two different vital buses, must be operable. Note that one piping path of SW and CC is adequate if it supports both RHR loops.

REACTOR COOLANT SYSTEM

COLD SHUTDOWN

LIMITING CONDITION FOR OPERATION

==========

3.4.1.4 Two# residual heat removal loops shall be OPERABLE* and at least one RHR loop shall be in operation.**

APPLICABILITY: MODE 5.##

ACTION:

a. With less than the above required loops operable, immediately initiate corrective action to return the required loops to OPERABLE status as soon as possible.

b. With no RHR loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required RHR loop to operation.

SURVEILLANCE REQUIREMENTS

==========

4.4.1.4 At least one residual heat removal loop shall be verified to be in operation and circulating reactor coolant at least once per 12 hours.

One RHR loop may be inoperable for up to two hours for surveillance testing, provided the other RHR loop is OPERABLE and in operation. Additionally, four filled reactor coolant loops, with at least two steam generators with their secondary side water levels greater than or equal to 5% (narrow range), may be substituted for one residual heat removal loop.

A reactor coolant pump shall not be started with one or more of the RCS cold leg temperatures less than or equal to 312°F unless 1) the pressurizer water volume is less than 1650 cubic feet (equivalent to approximately 92% of level), or 2) the secondary water temperature of each steam generator is less than 50°F above each of the RCS cold leg temperatures.

* Systems supporting RHR loop operability may be excepted as follows:

a. The normal or emergency power source may be inoperable.

DELETE

b. One service water header may be out of service provided the equipment listed in Table 3.4-3 is OPERABLE.

** The residual heat removal pumps may be de-energized for up to 2 hours provided 1) no operations are permitted that would cause dilution of the reactor coolant system boron concentration, and 2) core outlet temperature is maintained at least 10°F below saturation temperature.

TABLE 3.4-3

MINIMUM EQUIPMENT REQUIRED FOR DECAY HEAT REMOVAL WITH ONE SERVICE WATER HEADER OUT OF SERVICE

- Both Residual Heat Removal Pumps, Heat Exchangers, and associated redundant flowpaths
- Two Component Cooling Pumps, one Component Cooling Heat Exchanger with operable flowpaths to each RHR Heat Exchanger
- Two Service Water Pumps
- Two Safety Grade Pumps, in addition to the RHR pumps, capable of injecting makeup flow into the core (any combination of safety injection***, charging*** or containment spray pumps)

*** One of the available pumps may be administratively removed from service in order to comply with the requirements of Section 3.5.3 footnote (#) and 4.5.3.2, provided that the pump can be made operable within 15 minutes.

DELETE

REFUELING OPERATIONS

LOW WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.8.2 Two independent Residual Heat Removal (RHR) loops shall be OPERABLE.*

APPLICABILITY: MODE 6 when water level above the top of the reactor pressure vessel flange is less than 23 feet.

ACTION:

a. With less than the required RHR loops operable, immediately initiate corrective action to return the required RHR loops to OPERABLE status as soon as possible.

b. The provisions of Specification 3.0.3 are to applicable.

SURVEILLANCE REQUIREMENTS

4.9.8.2 The required Residual Heat Removal loops shall be determined OPERABLE per Specification 4.0.5.

* Systems supporting RHR loop operability may be excepted as follows:

a. The normal or emergency power source may be inoperable.

b. One service water header may be out of service provided the equipment listed in Table 3.4-3 is OPERABLE.

DELETE

3/4.4 REACTOR COOLANT SYSTEM

BASES

3/4.4.1 REACTOR COOLANT LOOPS AND COOLANT CIRCULATION

The plant is designed to operate with all reactor coolant loops in operation, and maintain DNBR above 1.30 during all normal operations and anticipated transients. In MODES 1 and 2 with less than all coolant loops in operation, this specification requires that the plant be in at least HOT STANDBY within 1 hour.

In MODE 3, a single reactor coolant loop provides sufficient heat removal for removing decay heat; but, single failure considerations require all loops be in operation whenever the rod control system is energized and at least one loop be in operation when the rod control system is deenergized.

In MODE 4, a single reactor coolant loop or RHR loop provides sufficient heat removal for removing decay heat; but, single failure considerations require that at least 2 loops be OPERABLE. Thus, if the reactor coolant loops are not OPERABLE, this specification requires that two RHR loops be OPERABLE.

REPLACE WITH INSERT 1

In MODE 5, single failure considerations require that two RHR loops be OPERABLE. The provisions of Sections 3.4.1.4 and 3.9.8.2 [paragraph (b) of footnote (*)] which permit one service water header to be out of service, are based on the following:

1. The period of time during which plant operations rely upon the provisions of this footnote shall be limited to a cumulative 45 days for any single outage, and

2. The Gas Turbine shall be operable, as a backup to the diesel generators, in the event of a loss of offsite power, to supply the applicable loads. The basis for OPERABILITY is one successful startup of the Gas Turbine no more than 14 days prior to the beginning of the Unit outage.

The operation of one Reactor Coolant Pump or one RHR Pump provides adequate flow to ensure mixing, prevent stratification and produce gradual reactivity changes during Boron concentration reductions in the Reactor Coolant System. The reactivity change rate associated with Boron concentration reductions will, therefore, be within the capability of operator recognition and control.

The restrictions on starting a Reactor Coolant Pump below P-7 with one or more RCS cold legs less than or equal to 312°F are provided to prevent RCS pressure transients, caused by energy additions from the secondary system, which could exceed the limits of Appendix G to 10CFR Part 50. The RCS will be protected against overpressure transients and will not exceed the limits of Appendix G by either (1) restricting the water volume in the pressurizer (thereby providing a volume into which the primary coolant can expand, or (2) by restricting the starting of Reactor Coolant Pumps to those times when secondary water temperature in each steam generator is less than 50°F above each of the RCS cold leg temperatures.

INSERT 1

For support systems; Service Water (SW) and Component Cooling (CC), component redundancy is necessary to ensure no single active component failure will cause the loss of RHR. Therefore, two SW pumps and two CC pumps, powered from two different vital buses, must be operable. Note that one piping path of SW and CC is adequate if it supports both RHR loops.

3/4.9.6 MANIPULATOR CRANE

The OPERABILITY requirements for the manipulator cranes ensure that: 1) manipulator cranes will be used for movement of control rods and fuel assemblies, 2) each crane has sufficient load capacity to lift a control rod or fuel assembly, and 3) the core internals and pressure vessel are protected from excessive lifting force in the event they are inadvertently engaged during lifting operations.

3/4.9.7 CRANE TRAVEL - SPENT FUEL STORAGE BUILDING

The restriction on movement of loads in excess of the nominal weight of a fuel and control rod assembly and associated handling tool over other fuel assemblies in the storage pool ensures that in the event this load is dropped (1) the activity release will be limited to that contained in a single fuel assembly, and (2) any possible distortion of fuel in the storage racks will not result in a critical array. This assumption is consistent with the activity release assumed in the accident analyses.

3/4.9.8 RESIDUAL HEAT REMOVAL AND COOLANT CIRCULATION

The requirements that at least one residual heat removal loop be in operation ensures that (1) sufficient cooling capacity is available to remove decay heat and maintain the water in the reactor pressure vessel below 140°F as required during the REFUELING MODE, and (2) sufficient coolant circulation is maintained through the reactor core to minimize the effects of a boron dilution incident and prevent boron stratification. A minimum flow rate of 1000 gpm is required. Additional flow limitations are specified in plant procedures, with the design basis documented in the Salem UFSAR. These flow limitations address the concerns related to vortexing and air entrapment in the Residual Heat Removal system, and provide operational flexibility by adjusting the flow limitations based on time after shutdown. The requirement to have two RHR loops OPERABLE when there is less than 23 feet of water above the reactor vessel flange ensures that a single failure of the operating RHR loop will not result in a complete loss of residual heat removal capability. The provisions of Sections 3.4.1.4 and 3.9.8.2 [paragraph (b) of footnote (*)] which permit one service water header to be out of service, are based on the following:

1. The period of time during which plant operations rely upon the provisions of this footnote shall be limited to a cumulative 45 days for any single outage, and

2. The Gas Turbine shall be operable, as a backup to the diesel generators, in the event of a loss of offsite power, to supply the applicable loads. The basis for OPERABILITY is one successful startup of the Gas Turbine no more than 14 days prior to the beginning of the Unit outage.

With the reactor vessel head removed and 23 feet of water above the reactor pressure vessel flange, a large heat sink is available for core cooling. Thus, in the event of a failure of the operating RHR loop, adequate time is provided to initiate emergency procedures to cool the core.

REPLACE WITH INSERT 1

INSERT 1

For support systems; Service Water (SW) and Component Cooling (CC), component redundancy is necessary to ensure no single active component failure will cause the loss of RHR. Therefore, two SW pumps and two CC pumps, powered from two different vital buses, must be operable. Note that one piping path of SW and CC is adequate if it supports both RHR loops.