



GULF STATES UTILITIES COMPANY

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RBG - 22,457

File No. G9.5

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

River Bend Station - Unit 1
Docket No. 50-458

Provided for your review is a list of changes that Gulf States Utilities Company (GSU) requests to be included in the Technical Specifications which will accompany the full-power operating license for the River Bend Station. These items represent Nuclear Regulatory Commission (NRC) requested changes, clarifications and enhancements, a GSU requested correction and changes removing the one-time exceptions applicable to the five percent license. Enclosure 1 provides a composite list of the requested changes. Enclosures 2 through 7 provide a discussion, justification and proposed markup for each requested change.

None of these changes affect the ability of GSU to safely operate the facility under its current five percent license and Technical Specifications. Thus, no amendment of the present low-power license is being sought.

Sincerely,

J. E. Booker

J. E. Booker
Manager-Engineering
Nuclear Fuels & Licensing
River Bend Nuclear Group

JEB/JEP/je

Enclosures

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ENCLOSURE 1

<u>TECH SPEC PAGE(S)</u>	<u>ITEM</u>	<u>ENCLOSURE NO.</u>
1. 3/4 3-91	Table 3.3.7.8-1 - Fire detection instrumentation in the pipe tunnel area	Enclosure 2
2. 3/4 4-10	3/4.4.3.1 - Leak detection in the drywell	Enclosure 3
3. 3/4 4-11 3/4 4-12	3/4.4.3.2 - Isolation valve leakage	Enclosure 4
4. 3/4 4-18 3/4 4-19 B 3/4 4-4 D 3/4 4-5 6-16	3/4.4.5 - Generic Letter 85-19 pertaining to reporting of iodine activity limits	Enclosure 5
5. 3/4 7-30 3/4 9-19 3/4 12-8	Various one-time exceptions applicable with the five percent license	Enclosure 6
6. B 3/4 6-5	3/4.6.3 - Bases for the suppression pool pump-back system	Enclosure 7

ENCLOSURE 2

Technical Specification 3.3.7.8
Table 3.3.7.8-1

Fire Detection Instrumentation

Table 3.3.7.8-1, Fire Detection Instrumentation, presently requires 10 smoke detectors for the Electrical Tunnel zone SD-83, General Area Elevation 70'0", 9 smoke detectors for the Pipe Tunnel zone SD-86, General Area Elevation 70'0", 4 smoke detectors for the Pipe Tunnel zone SD-87, General Area Elevation 67'6", 5 smoke detectors for the Pipe Tunnel zone SD-88, General Area Elevation 67'6", and 8 smoke detectors for the Pipe Tunnel zone SD-89, General Area Elevation 67'6". These smoke detectors provide actuation of fire suppression systems and early warning fire detection.

This change request is to revise the number of required smoke detectors from 10 to 12 in zone SD-83, from 9 to 18 in zone SD-86, from 4 to 7 in zone SD-87, from 5 to 10 in zone SD-88 and from 8 to 17 in zone SD-89.

During the performance of surveillance test procedure zone SD-88, it was determined that five additional detectors, which had not been previously identified in the Technical Specifications, were located in the area. As a result of the NRC Appendix R audit in February 1985, additional fire wrapping was required around an electrical cable tray. Upon installation of this fire wrapping, these five additional detectors were mounted inside the tray. The technical specification change will provide consistency between the as-built design and the Technical Specifications.

Additionally, GSU implemented a conformance review of all fire detection zones listed in the Technical Specifications. During this conformance review, two additional detectors were requested to be added to the Technical Specifications. These detectors were added by GSU to provide additional fire detection equipment in one area of zone SD-83 due to a recent installation of a room wall. These detectors are not required to meet the fire hazards analysis and thus adding these detectors is deemed an enhancement to the Technical Specifications.

A review of fire protection design drawings by American Nuclear Insurers was performed in March and April of 1985. In zone SD-86, SD-87, and SD-89 it was found that fire detector spacing was in excess of the manufacturer's recommendation of 250 square feet/detector. That was further reviewed by GSU and, as a result, a modification request was generated in October to add 9 fire detectors to zone SD-86, 3 fire detectors to zone SD-87 and 7 fire detectors to zone SD-89. Additionally, a modification request was generated in October to add 2 additional fire detectors to zone SD-89 inside the Appendix R fire wrap envelope to provide protection inside the envelope.

TABLE 3.3.7.8-1 (Continued)

FIRE DETECTION INSTRUMENTATION

<u>INSTRUMENT LOCATION</u>		<u>TOTAL INSTRUMENTS OPERABLE*</u>		
		<u>HEAT</u> (x/y)	<u>FLAME</u> (x/y)	<u>SMOKE</u> (x/y)
IV.	<u>FUEL BUILDING</u> <u>ZONE</u> (Continued)			
SD-110	FUEL POOL PURIFICATION & BACKWASH PUMP AREAS, EL 70'0"			3/0
SD-111	FUEL POOL COOLER (A & B) AREAS, EL 95'0"			2/0
SD-121	CHARCOAL FILTER "A" ROOM, EL 148'0"			2/0
SD-123	CHARCOAL FILTER "B" ROOM, EL 148'0"			2/0
SD-124	1RMS*CAB101 AREA, EL 148'0"			4/0
SD-155	GENERAL AREA, EL 113'0"			4/0
FD-35	CHARCOAL FILTER "A" ROOM, EL 148'0"	1/0		
FD-36	CHARCOAL FILTER "B" ROOM, EL 148'0"	1/0		
V.	<u>ELECTRICAL TUNNELS</u> <u>ZONE</u>			
SD-79	GENERAL AREA, EL 67'6"			0/6
SD-80	GENERAL AREA, EL 67'6"			0/6
SD-81	GENERAL AREA, EL 67'6"			0/11
SD-82	GENERAL AREA, EL 67'6"			0/12
SD-83	GENERAL AREA, EL 70'0"			0/ 10 12
VI.	<u>PIPE TUNNEL</u> <u>ZONE</u>			
SD-86	GENERAL AREA, EL 70'0"			0/ 9 18
SD-87	GENERAL AREA, EL 67'6"			0/ 4 7
SD-88	GENERAL AREA, EL 67'6"			0/ 5 10
SD-89	GENERAL AREA, EL 67'6"			0/ 8 17
VII.	<u>DIESEL GENERATOR BUILDING</u> <u>ZONE</u>			
SD-105	GENERAL AREA, EL 98'0"			3/0
FD-16	DIESEL ROOM DIV. II, EL 98'0"	0/4		
FD-17	DIESEL ROOM DIV III, EL 98'0"	0/4		
FD-18	DIESEL ROOM DIV I, EL 98'0"	0/4		

* (x/y): x is number of Function A (early warning fire detection and notification only) instruments.
y is number of Function B (actuation of fire suppression systems and early warning fire detection).

ENCLOSURE 3

JUSTIFICATION

Technical Specification 3.4.3.1

Leakage Detection Systems

Surveillance Requirement 4.4.3.1 presently does not require flow testing the drywell floor drain sump inlet piping for blockage. This change request would add a new requirement to perform this flow testing prior to startup following the first refueling outage and at least once every 18 months, thereafter.

The additional Surveillance requirement was suggested by the NRC Staff as an enhancement to the River Bend Station Technical Specifications. Gulf States Utilities has reviewed and found acceptable this NRC recommendation as proposed herein.

REACTOR COOLANT SYSTEM

3/1.4.3 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.3.1 The following reactor coolant system leakage detection systems shall be OPERABLE:

- a. The drywell atmosphere particulate radioactivity monitoring system,
- b. The drywell and pedestal floor sump drain flow monitoring systems,
- c. Either the drywell air coolers condensate flow rate monitoring system or the drywell atmosphere gaseous radioactivity monitoring system.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

With only two of the above required leakage detection systems OPERABLE, operation may continue for up to 30 days provided grab samples of the drywell atmosphere are obtained and analyzed at least once per 24 hours when the required gaseous and/or particulate radioactive monitoring system is inoperable. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.4.3.1 The reactor coolant system leakage detection systems shall be demonstrated OPERABLE by:

- a. Drywell atmosphere particulate and gaseous monitoring systems-performance of a CHANNEL CHECK at least once per 12 hours, a CHANNEL FUNCTIONAL TEST at least once per 31 days and a CHANNEL CALIBRATION at least once per 18 months.
- b. The sump drain flow monitoring systems-performance of a CHANNEL FUNCTIONAL TEST at least once per 31 days and a CHANNEL CALIBRATION TEST at least once per 18 months.
- c. Drywell air coolers condensate flow rate monitoring system-performance of a CHANNEL FUNCTIONAL TEST at least once per 31 days and a CHANNEL CALIBRATION at least once per 18 months.
- d. Flow testing the drywell floor drain sump inlet piping for blockage at least once every 18 months.*

* Not required to be performed until prior to startup following first refueling outage.

ENCLOSURE 4

JUSTIFICATION

Technical Specification 3.4.3.2

Isolation Valve Leakage

Technical Specification 3.4.3.2 presently restricts reactor coolant system leakage from any reactor coolant system pressure isolation valve specified in Table 3.4.3.2-1 to 1 gpm. This change request allows a 0.5 gpm leakage per nominal inch of valve size up to a maximum of 5 gpm and adds a new requirement to leak test the reactor coolant system pressure isolation valves specified in Table 3.4.3.2-1 in accordance with ASME Section XI, paragraph IWV-3427 (B).

This change was recommended to the CRGR by the NRC Staff as a generic change to the Standard Technical Specifications on February 14, 1985, and was approved by the CRGR on July 24, 1985. Once approved the change was suggested to GSU by the NRC Staff as an enhancement to the River Bend Station Technical Specifications. Gulf States Utilities has reviewed and found acceptable this NRC recommendation as proposed herein.

REACTOR COOLANT SYSTEM

OPERATIONAL LEAKAGE

LIMITING CONDITION FOR OPERATION

3.4.3.2 Reactor coolant system leakage shall be limited to:

- a. No PRESSURE BOUNDARY LEAKAGE.
- b. 5 gpm UNIDENTIFIED LEAKAGE.
- c. 25 gpm total leakage (averaged over any 24-hour period).
- d. ~~1 gpm~~ 0.5 gpm per nominal inch of valve size up to a maximum of 5 gpm leakage at a reactor coolant system pressure of 1025 ± 15 psig from any reactor coolant system pressure isolation valve specified in Table 3.4.3.2-1.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

- a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. With any reactor coolant system leakage greater than the limits in b and/or c, above, reduce the leakage rate to within the limits within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With any reactor coolant system pressure isolation valve leakage greater than the above limit, isolate the high pressure portion of the affected system from the low pressure portion within 4 hours by use of at least two other closed manual, deactivated automatic or check* valves, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- d. With one or more of the high/low pressure interface valve leakage pressure monitors shown in Table 3.4.3.2-2 inoperable, restore the inoperable monitor(s) to OPERABLE status within 7 days or verify the pressure to be less than the alarm point at least once per 12 hours; restore the inoperable monitor(s) to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours and COLD SHUTDOWN within the following 24 hours. The provisions of Specification 3.0.4 are not applicable.

* Which have been verified not to exceed the allowable leakage limit at the last refueling outage or after the last time the valve was disturbed, whichever is more recent.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS

4.4.3.2.1 The reactor coolant system leakage shall be demonstrated to be within each of the above limits by:

- a. Monitoring the drywell atmospheric particulate radioactivity at least once per 12 hours,
- b. Monitoring the sump flow rates at least once per 12 hours,
- c. Monitoring the drywell air coolers condensate flow rate at least once per 12 hours, and
- d. Monitoring the reactor vessel head flange leak detection system at least once per 24 hours.

4.4.3.2.2 Each reactor coolant system pressure isolation valve specified in Table 3.4.3.2-1 shall be demonstrated OPERABLE by leak testing pursuant to Specification 4.0.5 and verifying the leakage of each valve to be within the specified limit:

(including paragraph IWV-3427(B) of the ASME code)

- a. At least once per 18 months, and
- b. Prior to returning the valve to service following maintenance, repair or replacement work on the valve which could affect its leakage rate.

The provisions of Specification 4.0.4 are not applicable for entry into OPERATIONAL CONDITION 3.

4.4.3.2.3 The high/low pressure interface valve leakage pressure monitors shall be demonstrated OPERABLE with alarm setpoints per Table 3.4.3.2-2 by performance of a:

- a. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
- b. CHANNEL CALIBRATION at least once per 18 months.

ENCLOSURE 5

JUSTIFICATION

Technical Specification 3.4.5

Iodine Activity Limits

Technical Specification 3.4.5 presently requires preparation and submittal of Special Reports upon exceeding coolant iodine activity limits and shutdown after exceeding 800 hours cumulative operating time in a consecutive 12-month period with iodine above the limit. This change request would delete these requirements from the River Bend Station Technical Specifications.

This change was suggested to GSU by the NRC Staff (as the result of the issuance of Generic Letter 85-19) as an enhancement to the River Bend Station Technical Specifications. Gulf States Utilities has reviewed and found acceptable this NRC recommendation as proposed herein.

REACTOR COOLANT SYSTEM

3/4.4.5 SPECIFIC ACTIVITY

LIMITING CONDITION FOR OPERATION

3.4.5 The specific activity of the primary coolant shall be limited to:

- a. Less than or equal to 0.2 microcuries per gram DOSE EQUIVALENT I-131, and
- b. Less than or equal to $100/\bar{E}$ microcuries per gram.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 and 4.

ACTION:

- a. In OPERATIONAL CONDITIONS 1, 2 or 3 with the specific activity of the primary coolant;
 1. Greater than 0.2 microcuries per gram DOSE EQUIVALENT I-131 but less than or equal to 4.0 microcuries per gram, ~~operation may continue for up to 48 hours provided that the cumulative operating time under these circumstances does not exceed 800 hours in any consecutive 12-month period. With the total cumulative operating time at a primary coolant specific activity greater than 0.2 microcuries per gram DOSE EQUIVALENT I-131 exceeding 500 hours in any consecutive six month period, prepare and submit within 30 days a Special Report to the Commission, pursuant to Specification 6.9.2, indicating the number of hours of operation above this limit. The provisions of Specification 3.0.4 are not applicable.~~
 2. ~~Greater than 0.2 microcuries per gram DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval or for more than 800 hours cumulative operating time in a consecutive 12-month period, or greater than 4.0 microcuries per gram, be~~ in at least HOT SHUTDOWN, with the main steam line isolation valves closed, within 12 hours. DOSE EQUIVALENT I-131
 - 2 ~~3~~. Greater than $100/\bar{E}$ microcuries per gram, be in at least HOT SHUTDOWN, with the main steam line isolation valves closed, within 12 hours.
- b. In OPERATIONAL CONDITIONS 1, 2, 3 or 4, with the specific activity of the primary coolant greater than 0.2 microcuries per gram DOSE EQUIVALENT I-131 or greater than $100/\bar{E}$ microcuries per gram, perform the sampling and analysis requirements of Item 4a of Table 4.4.5-1 until the specific activity of the primary coolant is restored to within its limit. ~~A Special Report shall be prepared and submitted to the Commission within 30 days, pursuant to Specification 6.9.2. This report shall contain the results of the specific activity analyses,~~

REACTOR COOLANT SYSTEM

LIMITING CONDITION FOR OPERATION (Continued)

ACTION (Continued)

~~the time duration when the specific activity of the coolant exceeded 0.2 microcuries per gram DOSE EQUIVALENT I-131, and the following Additional Information.~~

c. In OPERATIONAL CONDITION 1 or 2, with:

1. THERMAL POWER changed by more than 15% of RATED THERMAL POWER in one hour*, or
2. The off-gas level, at the SJAE, increased by more than 10,000 microcuries per second in one hour during steady state operation at release rates less than 75,000 microcuries per second, or
3. The off-gas level, at the SJAE, increased by more than 15% in one hour during steady state operation at release rates greater than 75,000 microcuries per second,

perform the sampling and analysis requirements of Item 4b of Table 4.4.5-1 until the specific activity of the primary coolant is restored to within its limit. ~~A Special Report shall be prepared and submitted to the Commission at least once per 92 days, pursuant to Specification 6.9.2. This report shall contain, for each occurrence, the results of the specific activity analysis and the following Additional Information.~~

~~Additional Information~~

- ~~1. Reactor power history starting 48 hours prior to:
a) The first sample in which the limit was exceeded, and
b) The THERMAL POWER and/or off-gas level change.~~
- ~~2. Fuel burnup by core region.~~
- ~~3. Clean-up flow history starting 48 hours prior to:
a) The first sample in which the limit was exceeded, and
b) The THERMAL POWER and/or off-gas level change.~~
- ~~4. Off-gas level starting 48 hours prior to:
a) The first sample in which the limit was exceeded, and
b) The THERMAL POWER and/or off-gas level change.~~

*Not applicable during the startup test program.

ENCLOSURE 6

JUSTIFICATION

Technical Specifications 3.7.7; 3.9.12; 3.12.1

Various One-Time Exceptions

Technical Specifications 3.7.7, 3.9.12 and 3.12.1 presently contains various one-time exceptions that are required for the five percent license. This change request would delete these various one-time exceptions to the technical specifications as they are not applicable to the full power license.

This change is a clarification recommended by Gulf States Utilities for the River Bend Station Technical Specifications. The various one-time exceptions are not applicable to the full power license.

PLANT SYSTEMS

3/4.7.7 FIRE-RATED ASSEMBLIES

LIMITING CONDITION FOR OPERATION

3.7.7 All fire barrier assemblies shall be OPERABLE. Fire barrier assemblies include:

- a. Walls, floors/ceilings, cable tray enclosures, and other fire barriers that separate safety-related fire areas or that separate portions of redundant systems, important to safe shutdown, within a fire area, and
- b. All sealing devices in fire-rated assembly penetrations, including fire doors and fire dampers and cable, piping and ventilation duct penetration seals, and ventilation seals.

APPLICABILITY: At all times.

ACTION:

- a. With one or more of the above required fire-rated assemblies or sealing devices inoperable, within 1 hour establish a continuous fire watch on at least one side of the affected assembly and/or sealing device or verify the OPERABILITY of fire detectors on at least one side of the inoperable assembly or sealing device, and establish an hourly fire watch patrol.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.7.1 Each of the above required fire-rated assemblies and penetration sealing devices shall be verified OPERABLE at least once per 18 months by performing a visual inspection of:

- a. The exposed surfaces of each fire-rated assembly.
- b. Each fire damper and associated hardware.
- c. At least 10 percent of each type of sealed penetration. If changes in appearance or abnormal degradations are found, a visual inspection of an additional 10 percent of each type of sealed penetration shall be made. This inspection process shall continue until a 10 percent sample is found with no apparent changes in appearance or abnormal degradation. Samples shall be selected such that each penetration seal will be inspected at least once per 15 years.

~~The Fuel Pool Cooling System cable fire wrap is not required to be OPERABLE until October 31, 1985.~~

REFUELING OPERATIONS

3/4.9.12 INCLINED FUEL TRANSFER SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.12 The inclined fuel transfer system (IFTS) may be in operation provided that:

- a. The floor plugs are installed and the access door of all rooms through which the transfer system penetrates are closed and locked.
- b. All access interlocks and palm switches are OPERABLE.
- c. The blocking valve located in the fuel building IFTS hydraulic power unit is OPERABLE.✓
- d. At least one IFTS carriage position indicator at each carriage position is OPERABLE and at least one liquid level sensor is OPERABLE.✓
- e. The keylock switch which provides access control lockout is OPERABLE.
- f. The warning lights outside of the access doors are OPERABLE.

APPLICABILITY: When the IFTS containment blank flange is removed.

ACTION:

- a. With one or more access interlocks, warning lights, and/or palm switches inoperable, operation of the IFTS may continue provided that entry into the area is prohibited by establishing a continuous watch and conspicuously posting as a high radiation area.
- b. With the requirements of the above specification not otherwise satisfied, suspend IFTS operation with the IFTS at either terminal point. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.12.1 Within 1 hour prior to the startup of the IFTS, verify that no personnel are in areas immediately adjacent to the IFTS tube and that the floor plugs are installed and access doors, to rooms through which the IFTS tube penetrates, are closed and locked.

~~The blocking valve and liquid level sensor are not required to be operable during initial core loading.~~

TABLE 3.12.1-1 (Continued)

TABLE NOTATION (Continued)

- e - Gamma isotopic analysis means the identification and quantification of gamma-emitting radionuclides that may be attributable to the effluents from the facility.
- f - The "upstream sample" shall be taken at a distance beyond significant influence of the discharge. The "downstream" sample shall be taken in an area beyond but near the mixing zone. "Upstream" samples in an estuary must be taken far enough upstream to be beyond the plant influence.
- g - Composite samples shall be ~~collected weekly up to October 1, 1985. Thereafter, samples shall be~~ collected at intervals which are very short (e.g., hourly) relative to the compositing period (e.g., monthly).
- h - Groundwater samples shall be taken when this source is tapped for drinking or irrigation purposes in areas where the hydraulic gradient or recharge properties are suitable for contamination.
- i - The dose shall be calculated for the maximum organ and age group, using the methodology and parameters in the ODCM.

ENCLOSURE 7

JUSTIFICATION

Technical Specification 3.6.3.1

Suppression Pool Pumpback System (SPPS)

BASES section 3/4.6.3 presently does not clarify the intent of Technical Specification 3.6.3.1 with regards to the SPPS. The change request will add a discussion to the BASES section to clarify the intent that the SPPS is a necessary subsystem to ensure OPERABILITY of The Suppression Pool.

This change is a clarification recommended by Gulf States Utilities as a result of recent discussions with the NRC Staff with regards to including the SPPS subsystem in the River Bend Station Technical Specifications.

CONTAINMENT SYSTEMS

BASES

3/4.6.3 DEPRESSURIZATION SYSTEMS

The specifications of this section ensure that the drywell and primary containment pressures will not exceed the design pressures of 25 psig and 15 psig, respectively, during primary system blowdown from full operating pressure.

The suppression pool water volume must absorb the associated decay and structural sensible heat released during a reactor blowdown from 1045 psig. Using conservative parameter inputs, the maximum calculated primary containment pressure during and following a design basis accident is below the primary containment design pressure of 15 psig. Similarly the drywell pressure remains below the design pressure of 25 psig. The maximum and minimum water volumes for the suppression pool are 141,036 cubic feet and 137,571 cubic feet, respectively. These values include the water volume of the primary containment pool, horizontal vents, and weir annulus. Testing in the Mark III Pressure Suppression Test Facility and analysis have assured that the suppression pool temperature will not rise above 185°F for the full range of break sizes.

Should it be necessary to make the suppression pool inoperable, this shall only be done as specified in Specification 3.5.3.

Experimental data indicates that effective steam condensation, without excessive load on the primary containment pool walls, will occur with a quencher device and pool temperature below 200°F during relief valve operation. Specifications have been placed on the envelope of reactor operating conditions to assure the bulk pool temperature does not rise above 185°F in compliance with the containment structural design criteria.

In addition to the limits on temperature of the suppression pool water, operating procedures define the action to be taken in the event a safety/relief valve inadvertently opens or sticks open. As a minimum this action shall include (1) use of all available means to close the valve, (2) initiate suppression pool water cooling, (3) initiate reactor shutdown, and (4) if other safety/relief valves are used to depressurize the reactor, their discharge shall be separated from that of the stuck-open safety/relief valve to assure mixing and uniformity of energy insertion to the pool.

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The primary containment ventilation system consists of three 100% capacity unit coolers, two of which are safety related. Each of these two unit coolers provides independent 100% heat removal capacity in case of steam bypass of the suppression pool. The turbulence caused by the unit coolers aids in mixing the containment air volume to maintain a homogeneous mixture for H₂ control.

The suppression pool cooling function is a mode of the RHR system and functions as part of the containment heat removal system. The purpose of the

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The Suppression Pool Pumpback System (SPPS) is a necessary subsystem to ensure suppression pool level and therefore OPERABILITY of The Suppression Pool can be maintained in the event of a passive ECCS failure. The ECCS piping components can experience passive failures such as the suction valve packing failing, resulting in a maximum unisolatable leak into the Auxiliary crescent room of 50 gpm. The manually operated SPPS consists of two crescent room sumps with two 100% capacity sump pumps per sump. One pump is capable of pumping 65 gpm and is sufficient to ensure OPERABILITY of the Suppression Pool.