ATTACHMENT 1
SURRY POWER STATION
PROPOSED TECHNICAL SPECIFICATION CHANGE
PRESSURIZER SAFETY VALVES AND
CONTAINMENT HIGH-HIGH SETPOINT

e. Reactor power shall not exceed 50% of rated power with only two pumps in operation unless the overtemperature ΔT trip setpoints have been changed in accordance with Section 2.3, after which power shall not exceed 60% with the inactive loop stop valves open and 65% with the inactive loop stop valves closed.

f. When all three pumps have been idle for > 15 minutes, the first pump shall not be started unless: (1) a bubble exists in the pressurizer or (2) the secondary water temperature of each steam generator is less than 50°F above each of the RCS cold leg temperatures.

2. Steam Generator

A minimum of two steam generators in non-isolated loop shall be operable when the average reactor coolant temperature is greater than 350°F.

3. Pressurizer Safety Valves

a. Three valves shall be operable when the head is on the reactor, reactor coolant average temperature is greater than 350°F, the reactor is critical, or the Reactor Coolant System is not connected to the Residual Heat Removal System.

b. Valve lift settings shall be maintained at 2485 psig $\pm$ 1 percent *

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* For the remainder of Cycle 10 operation for both units the valve lift settings shall be maintained at 2485 +5,-1 percent.

4. Reactor Coolant Loops

Loop stop valves shall not be closed in more than one loop unless the Reactor Coolant System is connected to the Residual Heat Removal System and the Residual Heat Removal System is operable.

5. Pressurizer

a. The reactor shall be maintained subcritical by at least 1% until the steam bubble is established and the necessary sprays and at least 125 KW of heaters are operable.

b. With the pressurizer inoperable due to inoperable pressurizer heaters, restore the inoperable heaters within 72 hours or be in at least hot shutdown within 6 hours and the reactor coolant system temperature and pressure less than 350°F and 450 psig, respectively, within the following 12 hours.

One steam generator capable of performing its heat transfer function will provide sufficient heat removal capability to remove core decay heat after a normal reactor shutdown. The requirement for redundant coolant loops ensures the capability to remove core decay heat when the reactor coolant system average temperature is less than or equal to 350°F. Because of the low-low steam generator water level reactor trip, normal reactor criticality cannot be achieved without water in the steam generators in reactor coolant loops with open loop stop valves. The requirement for two operable steam generators, combined with the requirements of Specification 3.6, ensure adequate heat removal capabilities for reactor coolant system temperatures of greater than 350°F.

Each of the pressurizer safety valves is designed to relieve 295,000 lbs. per hr. of saturated steam at the valve setpoint. Two safety valves have a capacity greater than the maximum surge rate resulting from complete loss of load.(2)

The limitation specified in item 4 above on reactor coolant loop isolation will prevent an accidental isolation of all the loops which would eliminate the capability of dissipating core decay heat when the Reactor Coolant System is not connected to the Residual Heat Removal System.

Auxiliary Feedwater System Actuation

The automatic initiation of auxiliary feedwater flow to the steam generators by instruments identified in Table 3.7-2 ensures that the Reactor Coolant System Decay Heat can be removed following loss of main feedwater flow. This is consistent with the requirements of the "TMI-2 Lesson Learned Task Force Status Report," NUREG-0578, item 2.1.7.b.

Setting Limits

1. The high containment pressure limit is set at about 10% of design containment pressure. Initiation of Safety Injection protects against loss of coolant(2) or steam line break(3) accidents as discussed in the safety analysis.

2. The high-high containment pressure limit is set at about 23% of design containment pressure. Initiation of Containment Spray and Steam Line Isolation protects against large loss of coolant(2) or steam line break accidents(3) as discussed in the safety analysis.

3. The pressurizer low pressure setpoint for safety injection acutation is set substantially below system operating pressure limits. However, it is sufficiently high to protect against a loss-of-coolant accident as shown in the safety analysis.(2)

TABLE 3.7-4

ENGINEERED SAFETY FEATURE SYSTEM INITIATION LIMITS INSTRUMENT SETTING

NO.	FUNCTIONAL UNIT	CHANNEL ACTION	SETTING LIMIT
1	High Containment Pressure (High Containment Pressure Signal)	a) Safety Injection b) Containment Vacuum Pump Trip c) High Press. Containment Iso. d) Safety Injection Contain. Iso. e) F.W. Line Isolation	≤ 5 psig
2	High High Containment Pressure (High High Containment Pressure Signals)	a) Containment Spray b) Recirculation Spray c) Steam Line Isolation d) High High Press. Contain. Iso.	≤ 10.3 psig
3	Pressurizer Low Low Pressure	a) Safety Injection b) Safety Injection Cont. Iso. c) Feedwater Line Isolation	≥ 1,700 psig
4	High Differential Pressure Between Steam Line and the Steam Line Header	a) Safety Injection b) Safety Injection Contain. Iso. c) F.W. Line Isolation	≤ 150 psig
5	High Steam Flow in 2/3 Steam Lines	a) Safety Injection	≤ 40% (at zero load) of full steam flow ≤ 40% (at 20% load) of full steam flow
		b) Steam Line Isolation c) Safety Injection Contain. Iso. d) F.W. Line Isolation	≤ 110% (at full load) of full steam flow
	Coincident with Low T_{avg} or		≥ 541°F T_{avg}
	Low Steam Line Pressure		≥ 500 psig steam line pressure

ATTACHMENT 2

Significant Hazards Consideration

DISCUSSION

Technical Specification 3.1.A.3.a is an original Technical Specification that requires one pressurizer safety valve be operable whenever the head is on the reactor vessel, except during hydrostatic tests. It is implied that Technical Specification 3.1.A.3.a is only applicable when reactor coolant average temperature is less than 350 ° F, the reactor is subcritical, and the reactor coolant system is connected to the residual heat removal system. The implication is derived from Technical Specification 3.1.A.3.b, which requires that all three pressurizer safety valves be operable any time that the above three conditions cannot be met. In addition, the basis to Technical Specification 3.1.A discusses reactor coolant system relief requirements while below 350 ° F, with the reactor coolant system connected to the residual heat removal system. The Technical Specification basis states that there are no credible accidents which could occur when the reactor coolant system is connected to the residual heat removal system which could give a surge rate exceeding the capacity of one pressurizer safety valve. Hence, we conclude that Technical Specification 3.1.A.3.a is provided to ensure that the reactor coolant system is protected from overpressure when the reactor coolant temperature is less than 350 ° F and the reactor head is on the reactor vessel.

On August 11, 1976, the NRC requested an evaluation of the Surry Power Station system designs to determine susceptibility to overpressurization events. In response to the NRC request, Virginia Electric and Power Company provided the NRC with the requested evaluation and proposed a low temperature overpressure protection system and certain changes to Technical Specifications. The low temperature overpressure protection system was installed and Technical Specifications pertaining to reactor coolant system overpressure mitigation were issued by Amendments No. 56 and 55 to License Nos. DPR-32 and DPR-37, respectively. Technical Specification 3.1.G is the specification concerning reactor coolant system overpressure mitigation. This specification deals primarily with reactor coolant system pressure protection whenever the reactor coolant average temperature is less than or equal to 350 ° F and the reactor vessel head is bolted in place.

The NRC safety evaluation associated with Amendments No. 56 and 55 discusses the need for limiting reactor coolant system pressures at low temperatures. Ferritic materials used as pressure retaining components of the reactor coolant system are less tough and could possibly fail in a brittle manner if subjected to high pressures at low temperatures. Because of the potential for brittle fracture, the requirement to have one safety valve (nominal set pressure at 2485 psig) operable at reactor coolant temperatures less than 350° F is inadequate. Thus, the reactor coolant system is protected from overpressure events by the pressurizer safety valves at temperatures greater than 350° F and by the low temperature overpressure protection system at temperatures below 350° F. Accordingly, we conclude that Technical Specification 3.1.G supersedes original Technical Specification 3.1.A.3.a and hence, Specification 3.1.A.3.a should be deleted.

In addition, a typographical error is being corrected in Section 3.7. The setpoint for the containment High-High actuation setpoint was 25 psig and should be 25 psia or 10.3 psig. We are requesting 10.3 psig to provide consistent units in the Table. The basis is also being changed to provide the correct percent of design pressure that the containment spray system is actuated. The current number in the basis was determined using 25 psig, not 25 psia.

SIGNIFICANT HAZARDS CONSIDERATION

The proposed change to delete Technical Specification 3.1.A.3.a, requiring that one pressurizer safety valve be operable whenever the head is on the reactor vessel, does not result in a significant hazards consideration as defined in 10 CFR 50.92.

1. The proposed change does not significantly increase the probability or consequences of an accident previously evaluated. The purpose of Technical Specification 3.1.A.3.a is to assure that a relief path exists for the reactor coolant system whenever the head is on the reactor vessel. An operable relief path protects the reactor coolant system from potential failure due to overpressure. Because the relief valve acts in response to an overpressure event, no change in the probability of the overpressure event occurring will result. The consequences of an overpressure event will not be increased because the overpressure protection function has been assumed by the low temperature overpressure protection system. Technical Specifications relevant to the low temperature overpressure protection system are provided by Technical Specification 3.1.G. No physical change or modification is being made to the facility, nor are any operating procedures being revised.

2. The proposed change will not create the possibility of a new or different kind of accident from any accident previously evaluated. The change to Technical Specifications does not involve a physical change to the facility or its operating procedures. No accident or malfunction, other than an overpressure event discussed in paragraph 1 above, is relevant.

3. The proposed change does not involve a significant reduction in a margin of safety. As discussed in Paragraph 1 above, the overpressure protection function for the reactor coolant system (below 350 ° F) is provided by the low temperature overpressure protection system. Technical Specifications relevant to the low temperature overpressure protection system are provided by Technical Specification 3.1.G. Technical Specification 3.1.G, in effect, supersedes Technical Specification 3.1.A.3.a. Because no changes are proposed for Technical Specification 3.1.G, there is no reduction in the margin of safety for a low temperature overpressure event.