

ENCLOSURE 3

VOGTLE ELECTRIC GENERATING PLANT
REQUEST TO REVISE TECHNICAL SPECIFICATIONS
PRESSURIZER SAFETY VALVE AND SETPOINT TOLERANCE

MARKED-UP TECHNICAL SPECIFICATION AND BASES PAGES

The following pages from VEGP Unit 1 and Unit 2 TS LCO 3.4.10 and the associated Bases have been marked to show the proposed change.

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3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.10 Pressurizer Safety Valves

LCO 3.4.10 Three pressurizer safety valves shall be OPERABLE with lift settings \geq ~~2460~~ **2410** psig and \leq 2510 psig.

APPLICABILITY: MODES 1, 2, and 3.

-----NOTE-----
The lift settings are not required to be within the LCO limits during MODE 3 for the purpose of setting the pressurizer safety valves under ambient (hot) conditions. This exception is allowed for 54 hours following entry into MODE 3 provided a preliminary cold setting was made prior to heatup.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One pressurizer safety valve inoperable.	A.1 Restore valve to OPERABLE status.	15 minutes
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
<u>OR</u>	<u>AND</u>	
Two or more pressurizer safety valves inoperable.	B.2 Be in MODE 4.	12 hours

B 3.4 REACTOR COOLANT SYSTEM (RCS)

B 3.4.10 Pressurizer Safety Valves

BASES

BACKGROUND

The pressurizer safety valves provide, in conjunction with the Reactor Protection System, overpressure protection for the RCS. The pressurizer safety valves are of the pop type. The valves are spring loaded and self actuated by direct fluid pressure with backpressure compensation. The safety valves are designed to prevent the system pressure from exceeding the system Safety Limit (SL), 2735 psig, which is 110% of the design pressure.

At a pressurizer pressure of 2560 psig

Because the safety valves are self actuating, they are considered independent components. The relief capacity for each valve, 420,000 lb/hr, is based on postulated overpressure transient conditions resulting from a complete loss of steam flow to the turbine with the reactor operating at 102 percent of engineered safeguards design power. This event results in the maximum surge rate into the pressurizer, which specifies the minimum relief capacity for the safety valves. The discharge flow from the pressurizer safety valves is directed to the pressurizer relief tank. This discharge flow is indicated by an increase in temperature downstream of the pressurizer safety valves or increase in the pressurizer relief tank temperature or level.

The relief rate is stated at a pressure of 2560 psig which is equivalent to the former set pressure of 2485 psig plus 3% for set pressure tolerance and valve accumulation.

NEW TP

Overpressure protection is required in MODES 1, 2, 3, 4, 5, and MODE 6 with the reactor vessel head on; however, in MODES 4, 5, and 6 with the reactor vessel head on, overpressure protection is provided by operating procedures and by meeting the requirements of LCO 3.4.12, "Cold Temperature Overpressure Protection System (COPS)."

The decrease in set pressure to 2460 psig and increase in tolerance does not significantly affect the relief capacity of the safety valves.

The upper and lower pressure limits are based on the $\pm 7\%$ tolerance requirement (Ref. 1) for lifting pressures above ~~1000 psig~~. The lift setting is for the ambient conditions associated with MODES 1, 2, and 3. This requires either that the valves be set hot or that a correlation between hot and cold settings be established.

The pressurizer safety valves are part of the primary success path and mitigate the effects of postulated

assumed in the safety analyses

(continued)

BASES (continued)

LCO

of *2460 psig*
The three pressurizer safety valves are set to open at ~~the~~ *an* RCS ~~design~~ pressure (~~2500 psia~~), and within the ~~ASME~~ specified tolerance, to avoid exceeding the maximum design pressure SL, *and* to maintain accident analyses assumptions, *and* to comply with ASME requirements. The upper and lower pressure tolerance limits are based on the ~~± 1% tolerance~~ *2* requirements (Ref. 1) for lifting pressures above 1000 psig.

Assumed in the safety analyses
The limit protected by this Specification is the reactor coolant pressure boundary (RCPB) SL of 110% of design pressure.

APPLICABILITY

In MODES 1, 2, and 3, OPERABILITY of three valves is required because the combined capacity is required to keep reactor coolant pressure below 110% of its design value during certain accidents. MODE 3 is conservatively included, although the listed accidents may not require the safety valves for protection.

The LCO is not applicable in MODE 4, MODE 5, or MODE 6 (with the reactor vessel head on) because the cold overpressure protection system is in service. Overpressure protection is not required in MODE 6 with reactor vessel head removed.

The Note allows entry into MODE 3 with the lift settings outside the LCO limits. This permits testing and examination of the safety valves at high pressure and temperature near their normal operating range, but only after the valves have had a preliminary cold setting. The cold setting gives assurance that the valves are OPERABLE near their design condition. Only one valve at a time will be removed from service for testing. The 54 hour exception is based on 18 hour outage time for each of the three valves. The 18 hour period is derived from operating experience that hot testing can be performed in this timeframe.

ACTIONS

A.1

With one pressurizer safety valve inoperable, restoration must take place within 15 minutes. The Completion Time of

(continued)

BASES

ACTIONS

A.1 (continued)

15 minutes reflects the importance of maintaining the RCS overpressure protection system. An inoperable safety valve coincident with an RCS overpressure event could challenge the integrity of the pressure boundary.

B.1 and B.2

If the Required Action of A.1 cannot be met within the required Completion Time or if two or more pressurizer safety valves are inoperable, the plant must be brought to a MODE in which the requirement does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 4 within 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems. In MODE 4, overpressure protection is provided by the cold overpressure protection system. The change from MODE 1, 2, or 3 to MODE 4 reduces the RCS energy (core power and pressure), lowers the potential for large pressurizer insurges, and thereby removes the need for overpressure protection by three pressurizer safety valves.

SURVEILLANCE
REQUIREMENTS

SR 3.4.10.1

SRs are specified in the Inservice Testing Program. Pressurizer safety valves are to be tested in accordance with the requirements of Section XI of the ASME Code (Ref. 4), which provides the activities and Frequencies necessary to satisfy the SRs. No additional requirements are specified. The lift settings shall be ≥ 2450 psig and ≤ 2510 psig. The lift setting pressures shall correspond to ambient conditions of the valves at normal operating temperature and pressure.

2410

The pressurizer safety valve setpoint tolerance is $\pm 2\%$ for OPERABILITY; However, the valves shall be reset to $\pm 1\%$ during the surveillance to allow for drift.

(continued)