



South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

September 10, 2003
NOC-AE-03001592
10CFR50.90

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498 and STN 50-499
Response to Request for Additional Information Regarding a
Proposed Amendment to Technical Specification 3.4.2.2

Reference: Letter, T. J. Jordan to NRC Document Control Desk, "License Amendment Request - Proposed Amendment to Technical Specification 3.4.2.2," dated May 22, 2003 (NOC-AE-03001454)

This letter responds to an informal request for additional information regarding the referenced license amendment request. If there are any questions regarding this response, please contact Mr. Scott Head at (361) 972-7136.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on September 10, 2003

A handwritten signature in black ink, appearing to read "G. L. Parkey".

G. L. Parkey
Vice President, Generation

jtc

Attachment: Response to Request for Additional Information

A001

STI: 31653394

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(paper copy)

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Response to Request for Additional Information

1. The current Technical Specification (TS) 3.4.2.2 requires that all pressurizer safety valves (PSVs) shall be operable with a lift setting of 2485 psig $\pm 2\%$. The proposed modification will change the lift setting to 2485 psig $+2\%$, -3% . The proposed TS has a potential PSV lifting pressure of 2410 psig which is lower than the high pressure reactor trip setting of 2427 psig (2380 psig $+2\%$ instrument uncertainties). Please discuss the effects of the PSV lifting prior to a reactor trip with respect to a) potential delay of a needed reactor trip, and b) unnecessary challenge to PSVs.

Response:

The amendment request does not involve any physical modification of plant design, changes in plant operation, or revision of lift setting of the PSVs. The only change is in the definition of PSV operability in the Technical Specifications such that when tested, if the actual lift pressure of a PSV is outside the operability tolerance of $+2\%$, -3% , the PSV is declared inoperable. After testing, regardless of test results, the PSVs are reset to within $\pm 1\%$ of setpoint as currently stated in the Technical Specification.

Figure 1 graphically depicts the setpoint and tolerance for the high-pressure reactor trip. The PSV setpoint and proposed lower operability definition of -3% are also depicted. All numbers are rounded to the nearest whole number for ease of discussion.

The reactor protection system (RPS) pressurizer pressure-high nominal trip setpoint is based on the safety analysis reactor trip setpoint of 2420 psig. The total allowance (TA) applied to the safety analysis reactor trip setpoint is 40 psig (5% of span), which establishes a nominal trip setpoint value of 2380 psig.

The TA term is composed of two main components. The first is the calculated channel statistical allowance (CSA), which for this parameter is 25 psig (3% of span). The second component is margin, which is 15 psig (2% of span) for this parameter.

Each PSV has a setpoint of 2485 psig. The amendment request proposes changing the lower operability definition from -2% to -3% (75 psig), which equates to 2410 psig. If during testing, the PSV lifts below 2410 psig, it is declared inoperable.

Because the 2410 psig PSV lower operability definition overlaps the safety analysis reactor trip setpoint of 2420 psig, the potential exists for the PSV to lift before the RPS pressurizer pressure-high trip actuates. However, as can be seen in Figure 1, if the CSA of 25 psig is applied to the pressurizer pressure-high nominal trip setpoint (2380 psig), the highest value expected for the trip to occur is 2405 psig. This value is still 5 psig less than the expected 2410 psig PSV lower operability definition when considering steady-state conditions.

During transient events that result in rapid RCS pressurization, it is possible for the PSV to lift prior to control rod insertion due to a reactor trip on pressurizer pressure-high signal. This is due to delays associated with the Reactor Protection System and reactor trip breakers. However, a reactor trip and control rod insertion would still occur, even with the current -2% lower operability definition. In addition, the -3% lower operability definition has been considered in accident analyses and the results show all acceptance criteria are satisfied. Therefore, the proposed change does not result in unnecessary challenges to the PSV.

2. **Please discuss the effects of the change of PSV setting to the system downstream of the PSVs including the tail piping and pressurizer relief tank (PRT).**

Response:

The amendment request does not involve any physical modification of plant design, changes in plant operation, or revision of lift setting of the PSVs. There are no physical changes that would affect the design acceptability of the system downstream of the PSVs including the tail piping and PRT.

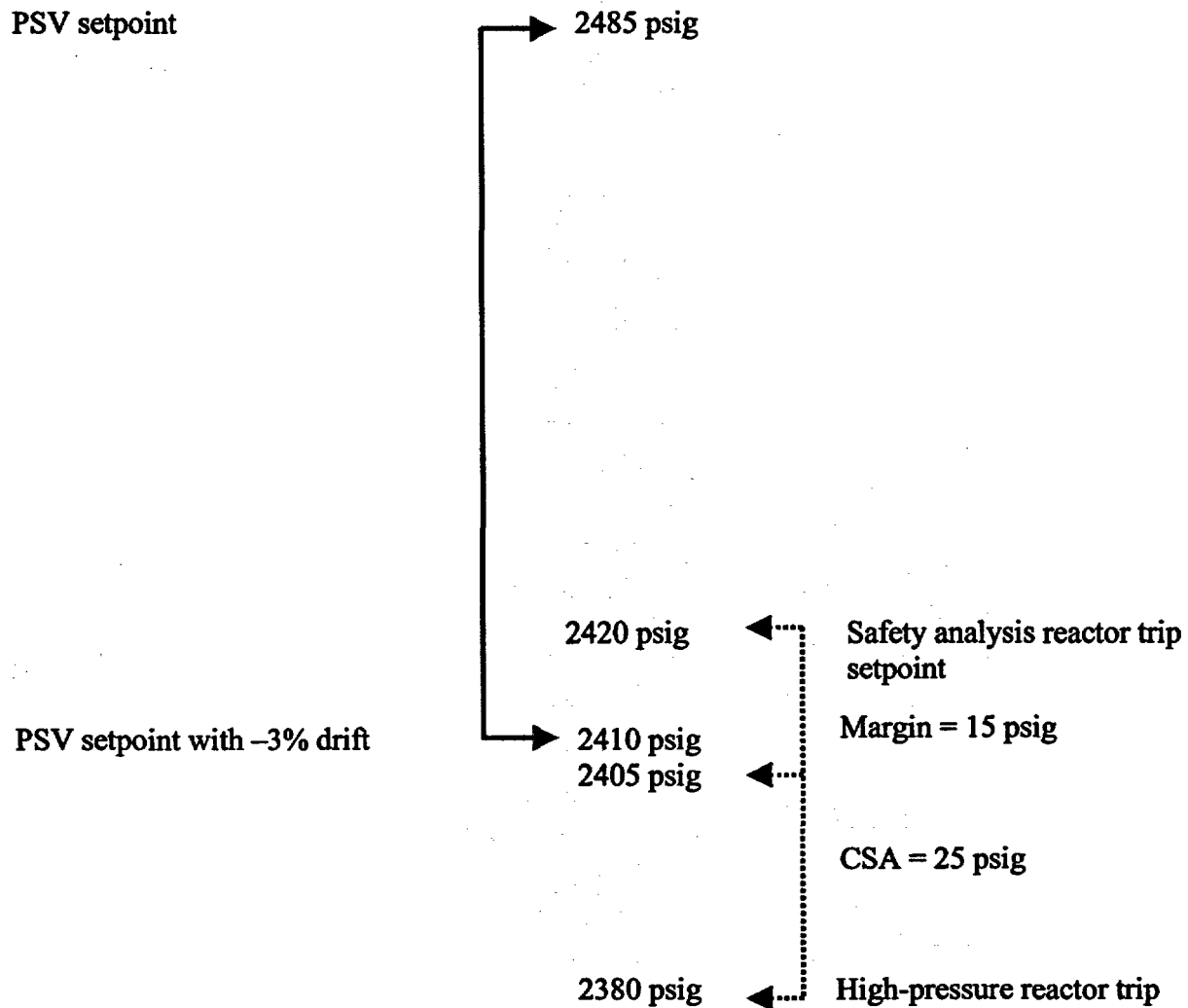


Figure 1