

Georgia Power Company
40 Inverness Center Parkway
Post Office Box 1295
Birmingham, Alabama 35201
Telephone 205 877-7122



Georgia Power

the southern electric system

LCV-0396

C. K. McCoy
Vice President, Nuclear
Vogtle Project

June 24, 1994

Docket Nos. 50-424
50-425

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT
REVISION TO "Z" AND "S" FOR PRESSURIZER PRESSURE
REACTOR TRIP INSTRUMENTATION TRIP SETPOINTS

In accordance with the provisions of 10 CFR 50.90 and 10 CFR 50.92, Georgia Power Company (GPC) hereby proposes to amend the Vogtle Electric Generating Plant (VEGP) Unit 1 and Unit 2 Technical Specifications, Appendix A to Operating Licenses NPF-68 and NPF-81.

This amendment revises the values of Z and S for the Pressurizer Pressure-Low and -High reactor trip setpoints (Table 2.2-1, Functional Units 9 and 10 respectively) to allow the use of alternate types of pressure transmitters. The values of Z and S for the Pressurizer Pressure-Low Engineered Safety Features Actuation System (ESFAS) Safety Injection (SI) actuation setpoint (Table 3.3-3, Functional Unit 1d) bound the proposed choices of transmitters and therefore are unaffected. The proposed changes do not affect the instrumentation setpoints and safety analysis limits.

Unit 1 pressurizer pressure transmitter IPT-457 has had a chronic history of drifting predominantly in an upward direction. Attempts to correct the excessive drift have included replacing the transmitter several times as well as several transmitter recalibrations. As discussed in the bases for Specifications 2.2.1 and 3.3.2, the excessive drift has been more than occasional and warrants further investigation. It is believed that the source of the drift is the transmitter and not the instrumentation downstream of the transmitter. To aid in further investigative efforts, GPC plans to substitute the current transmitter IPT-457 (Tobar Model 32 PA1) with a Rosemount Model 1154 Series H pressure transmitter. The Rosemount transmitter has an improved calibration accuracy and is less susceptible to drift as compared to the Tobar transmitter. The pressurizer pressure transmitters used at VEGP are a combination of Tobar Model 32PA1 and Veritrac Model 76PH2 transmitters. The change to the Technical Specifications will also allow any or all of the pressure transmitters to be Tobar, Veritrac, or Rosemount transmitters.

9406290226 940624
PDR ADDCK 03000424
P PDR

Acc
11

The values of Z and S in Table 2.2-1 for the pressurizer pressure instrument channels must be revised to allow for the use of Rosemount pressure transmitters. Even though the value of Z increases and the value of S decreases, the overall instrument loop uncertainty remains within the current total allowance, therefore, the existing total allowance and trip setpoints remain unchanged. This ensures that the conclusions of the safety analyses remain valid. The values of Z, S, total allowance, and setpoint in Table 3.3-3 remain unchanged.

Georgia Power Company plans to replace the IPT-457 Tobar transmitter with a Rosemount transmitter during the Unit 1 refueling outage scheduled to begin in September 1994. The refueling outage is a desirable time to replace the transmitter since it reduces the risk of a plant trip. On-line maintenance on this transmitter has resulted in two reactor trips and one safety injection at VEGP.

These Technical Specification changes are requested to be approved by August 31, 1994, in order to facilitate the replacement of the Tobar pressurizer pressure transmitter during the upcoming refueling outage.

The proposed changes and bases for the changes are described in Enclosure 1 to this letter. Enclosure 2 provides an evaluation pursuant to 10 CFR 50.92 showing that the proposed changes do not involve significant hazards considerations. Instructions for incorporation of the proposed changes into the Technical Specifications and a markup of the affected pages are provided in Enclosure 3.

In accordance with 10 CFR 50.91, the designated state official will be sent a copy of this letter and all enclosures.

Mr. C. K. McCoy states that he is a vice president of Georgia Power Company and is authorized to execute this oath on behalf of Georgia Power Company and that, to the best of his knowledge and belief, the facts set forth in this letter and enclosures are true.

GEORGIA POWER COMPANY

By: C.K. McCoy
C. K. McCoy

Sworn to and subscribed before me this 24th day of June, 1994.

Mary N. Bentley
Notary Public

LCV-0396

U. S. Nuclear Regulatory Commission

Page 3

Enclosures:

1. Basis for Proposed Change
2. 10 CFR 50.92 Evaluation
3. Marked-Up Pages

cc: Georgia Power Company
Mr. J. B. Beasley, Jr.
Mr. M. Sheibani
NORMS

U. S. Nuclear Regulatory Commission
Mr. S. D. Ebnetter, Regional Administrator
Mr. D. S. Hood, Licensing Project Manager, NRR
Mr. B. R. Bonser, Senior Resident Inspector, Vogtle

State of Georgia
Mr. J. D. Tanner, Commissioner, Department of Natural Resources

LCV-0396

ENCLOSURE 1

REVISION TO "Z" AND "S" FOR PRESSURIZER PRESSURE REACTOR TRIP INSTRUMENTATION TRIP SETPOINTS

BASIS FOR PROPOSED CHANGE

Proposed Change

In table 2.2-1 the Z and S values for pressurizer pressure-low and pressurizer pressure-high will be changed from "0.71" and "1.67" respectively to "0.71[#](1.04)" and "1.67[#](1.17)" respectively. A footnote will be added which states, "[#]The instrumentation used shall be bounded by either pair of values for Z and S."

Basis

Four redundant pressurizer pressure transmitters (PT-455, PT-456, PT-457, and PT-458) provide inputs to the logic for reactor trips on low and high pressurizer pressure and safety injection (SI) actuation on low pressurizer pressure. The setpoints at which the trips and SI actuation occur are specified in Technical Specification Tables 2.2-1 and 3.3-3, respectively.

Specific values of pressurizer pressure are assumed in the safety analyses for the initiation of reactor trips and SI actuation. In determining the values of the setpoints to ensure that the safety analysis limits are not exceeded, allowances are made for the accuracy with which the process variable, in this case pressurizer pressure, can be measured. These allowances account for instrument rack errors (R), sensor(transmitter) errors (S), and other errors (Z) associated with the measurement. The combination of these errors is referred to as the total allowance (TA). Values of TA, Z, and S are specified in Technical Specification Tables 2.2-1 and 3.3-3. The Allowable Value in the tables accounts for the effect of the rack errors, R, on the setpoints. In accordance with Specifications 2.2.1 and 3.3.2, the allowable values of the setpoints may be exceeded for a limited period of time as long as it is demonstrated that the total allowance is not exceeded. This is demonstrated using Equation 2.2-1 in Specification 2.2-1: $Z + R + S \leq TA$.

Unit 1 pressurizer pressure transmitter IPT-457 has had a chronic history of drifting predominantly in an upward direction. Attempts to correct the excessive drift have included replacing the transmitter several times as well as several transmitter recalibrations. As discussed in the bases for Specifications 2.2.1 and 3.3.2, the excessive drift has been more than occasional and warrants further investigation. It is believed that the source of the drift is the transmitter and not the instrumentation downstream of the

ENCLOSURE 1 (CONTINUED)

REVISION TO "Z" AND "S" FOR PRESSURIZER PRESSURE REACTOR TRIP INSTRUMENTATION TRIP SETPOINTS

BASIS FOR PROPOSED CHANGE

transmitter. To aid in further investigative efforts, GPC plans to substitute the current transmitter IPT-457(Tobar Model 32 PA1) with a Rosemount Model 1154 Series H pressure transmitter. The Rosemount transmitter has an improved calibration accuracy and is less susceptible to drift as compared to the Tobar transmitter. The pressurizer pressure transmitters used at VEGP are a combination of Tobar Model 32PA1 and Veritrak Model 76PH2 transmitters. The change to the Technical Specifications will also allow any or all of the pressure transmitters to be Tobar, Veritrak, or Rosemount transmitters.

As mentioned above, transmitter IPT-457 has been replaced and recalibrated several times. After each replacement or recalibration, the transmitter output continued to drift. The investigation into the root cause of the transmitter drift included: comparison of transmitter outputs, noise analyses, comparison of transmitter environments (temperature and vibration), troubleshooting and replacement of rack electronics, examination of sensing lines for leaks, laboratory testing, as well as discussions with the vendor and other utilities. To date, no apparent cause of the drift has been determined. Currently, some of the transmitters that have exhibited drift are installed in the plant on a test leg along with a Rosemount transmitter and a reference transmitter at normal system pressure.

The allowances described above have been reevaluated to account for the differences in the characteristics of the existing transmitters and Rosemount transmitters. The allowances in Technical Specification Tables 2.2-1 and 3.3-3 for pressurizer pressure are based on Tobar and Veritrak transmitters. For the Pressurizer Pressure-Low and -High reactor trips in Technical Specification Table 2.2-1, the value of Z increases from 0.71 to 1.04 and the value of S decreases from 1.67 to 1.17 for the Rosemount transmitter. The overall instrument loop uncertainty did not increase, therefore, the total allowance and hence the trip setpoints in Technical Specification Table 2.2-1 remain unchanged. This ensures that the conclusions of the safety analyses remain valid. The values of Z and S for the Rosemount transmitter will be added to Technical Specification Table 2.2-1. The values Z and S for the safety injection actuation on Pressurizer Pressure-Low in Technical Specification Table 3.3-3 bound the values determined for the Rosemount transmitter, therefore, no changes to the values of Z and S in the table are required. Also, the values of the trip setpoint and the total allowance are not affected.

ENCLOSURE 2

REVISION TO "Z" AND "S" FOR PRESSURIZER PRESSURE REACTOR TRIP INSTRUMENTATION TRIP SETPOINTS

10 CFR 50.92 EVALUATION

Pursuant to 10 CFR 50.92, Georgia Power Company (GPC) has evaluated the proposed revision to the Technical Specifications (TS) and has determined that operation of the facility in accordance with the proposed amendment would not involve any significant hazards considerations.

The proposed change will add values of Z and S to Technical Specification Table 2.2-1 for the Pressurizer Pressure-Low and -High reactor trip setpoints (Table 2.2-1, Functional Units 9 and 10) to allow the use of the existing Tobar and Veritrak pressure transmitters or the proposed Rosemount pressure transmitters. The corresponding values of Z and S for the Pressurizer Pressure-Low setpoint for safety injection actuation (Table 3.3-3, Functional Unit 1d) are bounding for these pressure transmitters. The setpoints, allowable values, and total allowances in the tables are not affected.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed change revises the allowances Z and S in Technical Specification Table 2.2-1 for the Pressurizer Pressure-Low and -High trip setpoints (Table 2.2-1, Functional Units 9 and 10) to allow the use of Tobar, Veritrak, or Rosemount pressure transmitters. Also, the corresponding values of Z and S for the Pressurizer Pressure-Low setpoint for safety injection actuation (Table 3.3-3, Functional Unit 1d) are bounding for these pressure transmitters. The allowances for Z and S are not assumed in any of the initiating events for the accident analyses. Therefore, the probability of any accident previously evaluated will not be affected by the proposed changes. Furthermore, the setpoints, allowable values, and total allowances are not affected. Since the total allowances are not affected, it is ensured that the safety analysis limits for the trips are not affected. Therefore, the proposed change does not involve a significant increase in the consequences of any accident previously evaluated.

ENCLOSURE 2

REVISION TO "Z" AND "S" FOR PRESSURIZER PRESSURE REACTOR TRIP INSTRUMENTATION TRIP SETPOINTS

10 CFR 50.92 EVALUATION

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The safety function provided by the reactor trips and safety injection actuation and the manner in which the plant is operated are not affected. The setpoints, allowable values, and total allowances are not affected. Since the total allowances are not affected, it is ensured that the safety analysis limits for the trips are not affected. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

For both the reactor trips and safety injection actuation, there are no changes to the setpoints. The total allowance for each setpoint is the difference between the safety analysis limit and the setpoint. Since the total allowances are not affected, there are no changes to the safety analysis limits. Therefore the proposed change will not involve a reduction in margin of safety.

Conclusion

Based on the preceding arguments, Georgia Power Company has determined that the proposed changes to the technical specifications will not significantly increase the probability or consequences of an accident previously evaluated, create the possibility of a new or different kind of accident from any accident previously evaluated, or involve a significant reduction in a margin of safety. Therefore, the proposed changes meet the requirements of 10 CFR 50.92(c) and do not involve a significant hazards consideration.