



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DECEMBER 10 1979

TERA

Docket Nos. 50-321
and 50-366

Mr. Charles F. Whitmer
Vice President - Engineering
Georgia Power Company
P. O. Box 4545
Atlanta, Georgia 30302

Dear Mr. Whitmer:

You responded by letters dated January 9, 1979 and August 29, 1979 to our letter of November 29, 1978 concerning Containment Purging. In your response you have attempted to justify unlimited purging during power operation.

During the course of our review of your submittals, we identified several areas where additional information is necessary to allow unlimited purging during power operation as you propose at Hatch Nuclear Plant Units Nos. 1 and 2. The enclosed request for additional information was discussed with you during a meeting on October 4, 1979. In addition, you were provided draft review criteria we are using for the electrical portion of the review. This review criteria is also enclosed.

Please provide your response within 60 days of receipt of this letter. Feel free to contact our office if you have any questions on this request for additional information.

Sincerely,

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosures:

1. Request for Additional Information
2. Electrical Review Criteria

cc w/enclosures:
see next page

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Mr. Charles F. Whitmer
Georgia Power Company

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ENCLOSURE 1

REQUEST FOR ADDITIONAL INFORMATION

FOR CONTAINMENT PURGE SYSTEM AND

CONTAINMENT VENTING SYSTEM FO.

HATCH NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 50-321/366

1. With regard to the containment purge and venting system, provide the following information:
 - a. Discuss the provisions made to ensure that isolation valve closure will not be prevented by debris which could potentially become entrained in the escaping air and steam.
 - b. Discuss the provisions made for testing the availability of the isolation function and the leakage rate of the isolation valves, individually, during reactor operation.
 - c. Specify the amount of containment atmosphere released through the purge and vent isolation valves for a spectrum of break sizes during the maximum closure time allowed in your Technical Specifications.
 - d. Provide an analysis to demonstrate the acceptability of the provisions made to protect structures and safety-related equipment, e.g., fans, filters, and ductwork, located beyond the purge system isolation valves against loss of function from the environment created by the escaping air and steam.
 - e. For the containment purge isolation valves, specify the differential pressure across the valve for which the maximum leak rate occurs. Provide test results (e.g., from vendor tests of leakage rate versus valve differential pressure) which support your conclusion.
2. Describe the modifications mentioned in your August 10, 1979 and August 29, 1979 letters. When will these modifications be completed? Does the system as modified conform with the following criteria:
 - a. Overriding one type of safety actuation signal must not cause the blocking of any other safety actuation signal.
 - b. Sufficient physical features are provided to facilitate administrative control.
 - c. System level annunciation of the overridden status is provided for every safety system impacted when any override is active.

3. Are the two units identical in respect to safety actuation circuits? Describe any differences.
4. Your letter of August 29, 1979 indicates that the containment spray injection valves have a (single?) key lock bypass switch which bypasses all isolation signals. Address how this switch is justified from a single failure standpoint.
5. Clarify if purging requires the use of the key lock bypass switch above or below 850 psig steam line pressure. Address how this switch is justified from a single failure standpoint.
6. Describe keylocked bypass switches and interfaces with valve control circuits.
7. Describe valve position switches and features to facilitate administrative control.
8. If the high radiation logic calls for valve closure, do both valve trains respond?
9. The Hatch 2 FSAR indicates that the radiation "upscale trips" meet the requirements of IEEE-279. Discuss the qualifications of other portions of the radiation monitoring channels.
10. Your letter of August 29, 1979 indicates that the analysis of a LOCA while purging through the 18" lines is unacceptable. What prevents purging through the 18" lines during reactor operation?
11. The FSAR describes the hybrid "one out of two taken twice" signal that represents the containment pressure and reactor vessel level. Is this descriptive of one out of two independent channels of actuation signals?

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ENCLOSURE 2

ELECTRICAL REVIEW CRITERIA

The primary intent of this evaluation is to determine if the following NRC staff criteria are met for the safety signals to all purge and ventilation isolation valves:

- (1) Criterion no. 1 - The overriding* of one type of safety actuation signal (e.g., radiation) must not cause the blocking of any other type of safety actuation signal (e.g., pressure) to the isolation valves.
- (2) Criterion no. 2 - Sufficient physical features (e.g., key lock switches) are provided to facilitate adequate administrative controls.
- (3) Criterion no. 3 - The system-level annunciation of the overridden status is provided for every safety system impacted when any override is active.

Incidental to this review, the following additional NRC staff design criteria were used in the evaluation:

- (1) Criterion no. 4 - Diverse signals should be provided to initiate isolation of the containment ventilation system. Specifically, containment high radiation, safety injection actuation, and containment high pressure should automatically initiate CVI. This is in conformance with Branch Technical Position 6.4 of Section 6.2.4 of the Standard Review Plan.
- (2) Criterion no. 5 - The instrumentation and control systems provided to initiate CVI should be designed and qualified as safety-grade equipment.
- (3) Criterion no. 6 - The overriding or resetting* of the isolation actuation signal should not cause the automatic reopening of any isolation/purge valve.

* The following definition is given for clarity of use in this evaluation:
Override: The signal is still present, and it is blocked in order to perform a function contrary to the signal.

Reset: The signal has come and gone, and the circuit is being cleared to return it to the normal condition.

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