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Docket No. 50-348

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Mr. F. L. Clayton, Jr.
Senior Vice President
Alabama Power Company
Post Office Box 2641
Birmingham, Alabama 35291

Dear Mr. Clayton:

SUBJECT: COMPLETION OF GENERIC ITEM B-24 AND TMI ACTION ITEM II.E.4.2.5

In our letter of November 28, 1978, we identified the generic concerns of purging and venting of containments to all operating reactor licensees and requested your response to these concerns. Our review of your response for Farley Unit 1 was interrupted by the TMI accident and its demands on staff resources. Consequently, as you know, an Interim Position on containment purging and venting was transmitted to you on October 23, 1979. You were requested to implement short-term corrective actions to remain in effect pending completion of our longer-term review of your response to our November 28, 1978 letter. Our longer-term review is now complete.

Over the past several months we and our contractors have been reviewing the responses to our November 1978 letter to close out our long-term review of this rather complex issue. The components of this review are as follows:

1. Conformance to Standard Review Plan Section 6.2.4 Revision 1 and Branch Technical Position CSB 6-4 Revision 1.

   These documents were provided as enclosures to our November 1978 letter.

2. Valve Operability

   Although the Interim Position of October 1979 allowed blocking of the valves at partial-open positions, this was indeed an interim position. Earlier we requested a program demonstrating operability of the valves in accordance with our "Guidelines for Demonstrative Operability of Purge and Vent Valves." These guidelines were sent to you in our letter of September 27, 1979. There is an acceptable alternative which you may wish to consider in lieu of completing the valve qualification program for the larger butterfly-type valves. This would be the installation of a fully-qualified mini-purge system with valves 8-inches or smaller to bypass the larger valves. Such a system change might prove more timely and more cost-effective. The system would meet BTP CSB 6-4 item B.1.c.

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3. Safety Actuation Signal Override

This involves the review of safety actuation signal circuits to ensure that overriding of one safety actuation signal does not also cause the bypass of any other safety actuation signal.

4. Containment Leakage Due to Seal Deterioration

Position B.4 of the BTP CSB 6-4 requires that provisions be made to test the availability of the isolation function and the leakage rate of the isolation valves in the vent and purge lines, individually, during reactor operations. But CSB 6-4 does not explain when or how these tests are to be performed. Enclosure 1 is an amplification of of Position B.4 concerning these tests.

5. Containment Pressure Setpoint for Containment Isolation

Position 5, Item II.E.4.2 of NUREG-0737, is the only part of Item II.E.4.2 which was not part of the original generic concern relating to containment purging and venting. However, it relates to Generic Item B-24 and is included herein.

The status of our long-term review completions of the above items for the Joseph M. Farley Unit No. 1 facility is as follows:

1. Conformance to Standard Review Plan Section 6.2.4 Revision 1 and Branch Technical Position CSB 6-4 Revision 1.

We have completed our review. However, since there may be some misunderstanding regarding the use of containment purge/vent valves, a restatement of salient features of the position as interpreted by the staff is provided in Enclosure 2 to assist in your understanding of this important matter. Enclosure 3 is our Safety Evaluation Report (SER) for this item. Certain plant modifications, as discussed in our SER, will assure compliance with the NRC positions stated in the SER. We will condition the operating license accordingly to show your modification schedule with the next amendment to be issued.

2. Valve Operability

We have completed our review. Enclosure 4 is our SER for this item. The 48-inch butterfly valves will be kept closed except for operational modes 5 and 6. The 18-inch butterfly valves may be open during modes 1-4 for safety related reasons. However, your staff should continue with the 3-inch system design or with the alternate 8-inch system design to meet BTP CSB 6-4 item B.1.c. Technical Specification changes may be accomplished during the current upgrading to the Unit No. 2 type specifications. However, you may provide a separate license amendment request along with appropriate fees to have the Technical Specifications modified per the sample specifications of Enclosure 5.

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3. Safety Actuation Signal Override

We have completed our review. Enclosure 5 is our SER for this item. With this SER, the electrical override aspects of our long-term review of this generic task is complete. It is noted that somewhat parallel review of engineered safety features reset is being carried out in conjunction with I&E Bulletin 80-06. That review will be handled separately outside the framework of the purge and vent review.

4. Containment Leakage Due to Seal Deterioration

We request that you propose a Technical Specification change incorporating the test requirements of Enclosure 6 together with the details of your proposed test program within 45 days of receipt of this letter. This will not be necessary if Technical Specification changes are made during the upgrading of Unit No. 1 Technical Specifications now underway.

5. Containment Pressure Setpoint for Containment Isolation

We completed the review during Unit No. 2 licensing. Technical Specifications will be changed during the uprgrading of Unit No. 1 specifications now underway. In the interim, the setpoint may be lowered to the new value as it is more conservative than the existing setting.

In closing, you may have noted that the long-term generic issue of containment purging and venting is similar to Item II.E.4.2 of TMI Action Plan, NUREG-0737. Except for II.E.4.2.5 (containment pressure setpoint) the issues are identical. Therefore, Item II.E.4.2 is completed except for issuance of Technical Specifications for II.E.4.2 and reviews of positions 6 and 7. These reviews will be handled separately from the B-24 reviews.

Your assistance was very helpful in completing the long-outstanding purge and vent generic item and TMI Action Item II.E.4.2. Although the Technical Specifications necessary to finalize Item II.E.4.2 are not completed, a recently developed sample Technical Specification is provided for your consideration as Enclosure 6. We request that you review existing Technical Specifications (TS) against the sample provided herein. For any areas in which your existing TS needs expansion, you are requested to provide a TS change request within 45 days of receipt of this letter. This would not be necessary if changes are made as noted in 4. above.

Please contact your NRC Project Manager should you have any questions.

Sincerely,

Original signed by:
S. A. Varga
Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Enclosures: As stated

cc w/enclosures
See next page

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It is intended that the above proposed surveillance specification be applied to the active purge/vent lines, as well as passive purge lines: i.e., the purge lines that are administratively controlled closed during reactor operating modes 1-4. The reason for including the passive purge lines is that B-20 is concerned wtih the potential adverse effect of seasonal weather conditions on the integrity of the isolation valves. Consequently, passive purge lines must also be included in the surveillance program.

The purpose of the leakage integrity tests of the isolation valves in the containment purge and vent lines is to identify excessive degradation of the resilient seats for these valves. Therefore, they need not be conducted with the precision required for the Type C isolation valve tests in 10 CFR Part 50, Appendix J. These tests would be performed in addition to the quantitative Type C tests required by Appendix J and would not relieve the licensee of the responsibility to conform to the requirements of Appendix J. In view of the wide variety of valve types and seating materials, the acceptance criteria for such tests should be developed on a plant-specific basis.

1. Purging/venting should be minimized during reactor operation because the plant is inherently safer with closed vent valves (containment) than with open lines which require valve action to provide containment. (Serious consideration is being given to ultimately requiring that future plants be designed such that purging/venting is not required during operation).
2. Some purging/venting on current plants will be permitted provided that:
   a) purging is needed and justified for safety purposes, and
   b) valves are judged by the staff to be both operable and reliable, and
   c) the estimated amount of radioactivity released during the time required to close the valve(s) following a LOCA either
      i. does not cause the total dose to exceed the 10 CFR Part 100 Guidelines; then a goal should be established which represents a limit on the annual hours of purging expected through each particular valve, or
      ii. causes the total dose to exceed the guideline valves; then purging/venting shall be limited to 90 hours/year.
3. Purging/venting should not be permitted when valves are being used that are known to be not operable or reliable under transient or accident conditions.