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**Alabama Power**

*the southern electric system*

July 5, 1983

Docket Nos. 50-348  
50-364

Director, Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Attention: Mr. S. A. Varga

Joseph M. Farley Nuclear Plant - Units 1 and 2  
Requests For Relief From Inservice Testing Requirements

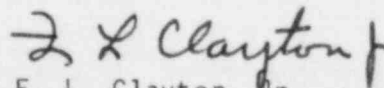
Gentlemen:

Alabama Power Company has reviewed the NRC safety evaluations related to the subject requests as set forth in your letters dated April 8, 1983 for Farley Nuclear Plant Unit 2 and dated May 2, 1983 for Farley Nuclear Plant Unit 1. Alabama Power Company concurs with the granted reliefs with the exception of the items discussed in Attachments 1 and 2. Included in the attachments are clarifications and corrections to the SERs and results of telecons with the NRC Staff.

It is requested that the NRC revise the Unit 1 and 2 SERs by September 1, 1983 as described in Attachments 1 and 2. Such revisions would ensure that the upcoming Unit 2 refueling outage (scheduled to begin September 16, 1983) is not impacted and that Alabama Power Company will be in compliance with an NRC approved IST program.

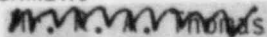
If you have any questions, please advise.

Yours very truly,

  
F. L. Clayton, Jr.

FLCJr/BDM: jc-D29

Attachment

cc:   
Mr. G. F. Trowbridge  
Mr. J. P. O'Reilly  
Mr. E. A. Reeves  
Mr. W. H. Bradford  
Dr. I. L. Myers

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## ATTACHMENT 1

### J. M. Farley Nuclear Plant - Unit 1 Inservice Testing Program Comments on NRC Safety Evaluation Report

1. Page 2 of cover letter - The application of this paragraph to Unit 2 is unclear. Specifically, Alabama Power Company is uncertain as to which scheduler requirements the NRC refers. Based on telephone conversations with the NRC Staff on June 29, 1983, it is our understanding that this paragraph applies only to Unit 2 items 3 & 4 of Attachment 2 to this letter which are related to the RWST check valve (Q2E13V014) and the accumulator discharge check valves (Q2E21V032A, B, C and Q2E21V037A, B and C).
2. Page 3 of summary and pages 40 and 47 of Attachment 2 - The position indicators for these valves are designed such that physical actuator movement must take place in order to activate the indicator. It is the judgement of Alabama Power Company that valve position indication from physical actuator movement provides accurate position status. The leak-rate test verifies that the position indicators accurately reflect the valves' fully closed position. The air pressure following each leak-rate test is relieved by opening these valves, thus verifying that the disk moves away from the seat because of the actuator. It is the judgement of Alabama Power Company that the proposed alternatives provide sufficient technical basis for granting of this relief request and that these alternatives meet the intent of the code.

During a telephone conversation with the NRC Staff on June 29, 1983, it was proposed that remote valve position indication from physical actuator movement be considered adequate to verify valve position.

It is requested that the NRC grant relief by September 1, 1983 to delete the requirement for visual observation of RHR valves (Q1E11V025A and B) and containment spray valves (Q1E13V003A and B).

3. Page 3 of summary and page 51 of Attachment 2 - In addition to the information previously submitted it should be noted that during refueling, i.e., with water in the refueling canal, approximately 150,000 gallons of water remain in the RWST. In order to disassemble V014, the RWST would have to be drained which could potentially degrade some of the plant safety features and present radiological and other problems associated with temporary storage of the 150,000 gallons of radioactive water. Alabama Power Company knows of no means to verify full stroke exercising of this valve without an expensive design change to install a safety grade manual isolation valve between the RWST and this check valve. Such a modification would necessitate extension of a regularly scheduled refueling outage by approximately two weeks. It is Alabama Power Company's understanding that the performance of inservice testing as mandated by regulatory requirements should not require a design change.

As discussed during the conversation with the NRC Staff on June 29, 1983, Alabama Power Company will provide the NRC additional information to support permanent relief from full stroke exercising of valve Q1E13V014. This additional information will be provided to the NRC prior to the end the Unit 1 sixth refueling outage.

4. Page 4 of summary and pages 64, 65 and 66 of Attachment 2 - From the information previously submitted it has been determined that full-stroke exercising of the accumulator discharge valves is impractical from a flow standpoint. The only other means of full-stroke testing these valves, of which we are aware of, is to remove the valve bonnet and physically exercise these valves. This is impractical from a radiation exposure standpoint. Alabama Power Company anticipates that approximately 3.5 manrems of exposure would be used to disassemble, exercise, and reassemble each valve. This results in approximately 21 manrems of exposure for these six valves, which directly conflicts with the NRC's ALARA requirements. In addition, disassembly of these valves would have to be conducted with the reactor vessel water level at mid plane which could significantly extend the critical path outage time requirement for normal refueling.

During conversations with the NRC Staff on June 29, 1983, it was stated that Alabama Power Company would provide additional information to the NRC supporting permanent relief from full-stroke exercising of valves Q1E21V032A, B, C and Q1E21V037A, B, C. This additional information will be provided to the NRC prior to the end of the Unit 1 sixth refueling outage.

5. Page 5 of summary - Valves Q1E21V037A, B, C were previously identified in item C of page 2 of the summary, therefore it is requested that these valves be deleted from item E of the summary list.
6. Pages 6 and 7 of summary - During the Unit 2 licensing process, the NRC added several valves to the Unit 2 Technical Specification requiring leak-rate testing. Alabama Power Company did not agree with the valves included in the Unit 2 Technical Specifications and upon subsequent review has determined that several valves should be deleted. During review of Alabama Power Company's Unit 1 IST program, the NRC added several valves to be leak-rate tested such that the same valves would be tested for Unit 1 as Unit 2.

As in the case of Unit 2, Alabama Power Company has determined that several valves should be deleted from the Unit 1 leak-rate test requirements.

In order to protect certain low pressure systems from overpressurization from the reactor coolant system (RCS) it has been determined that certain check valves are required to be leak-rate tested. Listed below are the check valves which Alabama Power Company has determined will provide protection for low pressure systems by establishing a two check valve pressure isolation barrier.

Pressure Isolation Valves

<u>System</u>	<u>Unit 1 Valves</u>
HHSI/CVCS	Q1E21V032A,B, C V037A,B, C V076A,B V077A,B, C
RHR/LHSI	Q1E11V021A,B, C * V042A,B *

\*Valves V042A,B and V021A,B are two sets of check valves in series with V051A,B,C. Alabama Power Company has reviewed the valve configurations and has determined that valves V021A,B,C and V042A,B should be leak-rate tested. Such testing would protect the RHR system (low pressure) from the reactor coolant system and, in the case of safety injection actuation, the HHSI pump discharge pressure. Since testing of V021A,B,C and V042A,B meets the NRC criteria for high to low pressure system protection, valves V051A,B,C need not be tested.

○ The remaining check valves on page 7 of the summary are located downstream of the HHSI/CVCS pumps. It is the judgement of Alabama Power Company that these check valves are not required to be leak-rate tested to protect the HHSI/CVCS system on the suction side of the pumps. Below is the basis for this position.

- a. The three Farley centrifugal charging pumps provide a dual function of providing flow for the CVCS and the HHSI. On some other plants the charging pumps and the HHSI pumps are separate pumps.
- b. During normal operation (Modes 1, 2 & 3) two charging pumps are required by the Technical Specifications to be operable. During hot shutdown (Mode 4) the Technical Specifications require that one charging pump be operable.
- c. During normal operation (Modes 1 through 4) at least one charging pump is running to provide normal charging to the RCS and to provide flow to reactor coolant pump seals. Therefore,

the charging pump discharge header is at normal charging pressure which is higher than RCS pressure. This precludes the RCS from interfacing with low pressure portions of the HHSI/CVCS.

- d. In series with check valves V062A,B,C exists two normally closed MOVs, the HHSI pump discharge check valve and V051A,B,C. These MOVs only open on a safety injection signal.

In series with check valves V066A,B,C exists one normally closed MOV, the HHSI pump discharge check valve and V051A,B,C. This MOV would only be opened during the recirculation phase following safety injection actuation and low-low level in the RWST.

In series with check valves V078A,B,C (V079A,B,C) exists one normally closed MOV, the HHSI pump discharge check valve and V077A,B,C which Alabama Power Company proposes to leak-rate test. As required by Technical Specifications, the power for the valve operator is locked open. In addition, this MOV is only opened during the recirculation phase following safety injection actuation and low-low level in the RWST.

Alabama Power Company proposes not to test any of the above check valves.

Also, page 7 of the summary lists four motor operated valves as pressure isolation valves. These valves are listed below:

Motor Operated Valves

<u>System</u>	<u>Valve</u>
RHR/LHSI	Q1E11V001A,B V016A,B

It is the judgement of Alabama Power Company that these valves are not required to be leak-rate tested in order to protect the RHR/LHSI low pressure systems. Below is the basis for this position.

- a) Valves are interlocked such that they cannot be opened when the reactor coolant system pressure is above 402.5 psig.
- b) Valves V001A&B currently receive a Type C test per Appendix J of 10 CFR 50.
- c) In the event of high to low pressure system leakage, the RHR suction relief valves would operate protecting the RHR system from overpressure. These relief valves have their setpoints verified as required by Technical Specifications. The RHR suction relief valves discharge to the containment.

- d) Motor operated valves are not subject to the same type of failures as check valves.

It is concluded that the valves previously listed as "Pressure Isolation Valves" and their equivalents in Unit 2 should be the valves leak-rate tested as pressure isolation valves. A Technical Specification change has already been submitted to request that the allowable leakage rates for the Unit 2 valves be changed to agree with that in Unit 1 as described in letters from F. L. Clayton to S. A. Varga, dated August 10, 1982 and December 23, 1982.

During conversations held on June 29, 1983, the NRC staff stated that they were reviewing the above list of proposed valves to be leak-rate tested. In addition, the NRC Staff stated that a revised valve leakage criteria is being reviewed by the CRGR. Alabama Power Company stated that a change in the technical specification criteria for valve leakage testing would be requested for the upcoming Unit 2 refueling outage if the August 10, 1982 request is not approved prior to September 1, 1983. Subsequent to the finalization of NRC leakage criteria, Alabama Power Company will submit a revised technical specification change related to valve leakage criteria and the scope of valves to be leak-rate tested.

- 7. Page 8 of summary - Valve Q1P19V004 is a check valve and it is the judgement of Alabama Power Company that verifying check valve position quarterly and each time the check valve is cycled is impractical. It was discussed during conversations held on June 29, 1983 with the NRC staff that Alabama Power Company would not verify the position of this check valve until the NRC formally identifies the test criteria to Alabama Power Company.
- 8. Page 8 and 9 of summary - As discussed with the NRC Staff on June 29, 1983, Alabama Power Company commitments made in response to IEB 83-03 will be sufficient to meet the intent of item K and will define the status of these valves, relative to the IST program.

## ATTACHMENT 2

### J. M. Farley Nuclear Plant - Unit 2 Inservice Testing Program Comments on NRC Safety Evaluation Report

1. Page 11 - To agree with the requested relief the following should be inserted in place of the brackets as shown on page 11 "...paragraph 2.1.1.2. In the event the quarterly requirements of Table P-I and ...".

During the June 29, 1983 telephone conversation with the NRC Staff, it was proposed that the above comment be included in the revised SER.

2. Pages 52 and 61 - The position indication for three of the four valves is obtained from physical actuator movement. The fourth valve utilizes a torque switch to provide valve position. A modification is planned for the second refueling outage (scheduled to begin in September 1983) such that position indication is derived from physical actuator movement. It is the judgement of Alabama Power Company that valve position indication obtained from physical actuator movement provides accurate position status. The leak-rate test verifies that the position indicators accurately reflect the valves' fully closed position. The air pressure following each leak-rate test is relieved by opening these valves, thus verifying that the disk moves away from the seat because of the actuator. It is the judgement of Alabama Power Company that the proposed alternatives provide sufficient technical basis for granting of this relief request and that these alternatives meet the intent of the code.

During a telephone conversation with the NRC Staff on June 29, 1983, it was proposed that remote valve position indication from physical actuator movement be considered adequate to verify valve position.

It is requested that the NRC grant relief by September 1, 1983 to delete the requirement for visual observation of RHR valves (Q2E11V025A and B) and containment spray valves (Q2E13V003A and B).

3. Page 64 - In addition to the information previously submitted it should be noted that during refueling, i.e., with water in the refueling canal, approximately 150,000 gallons of water remain in the RWST. In order to disassemble V014, the RWST would have to be drained which could potentially degrade some of the plant safety features and present radiological and other problems associated with temporary storage of the 150,000 gallons of radioactive water. Alabama Power Company knows of no means to verify full stroke exercising of this valve without an expensive design change to install a safety grade manual isolation valve between the RWST and this check valve. Such a modification would necessitate extension of a regularly scheduled refueling outage by approximately two weeks. It is Alabama Power Company's understanding that the performance of inservice testing as mandated by regulatory requirements should not require a design change.

As discussed during the conversation with the NRC Staff on June 29, 1983, Alabama Power Company will provide the NRC additional information to support permanent relief from full stroke exercising of valve Q2E13V014. This additional information will be provided to the NRC prior to the end of the Unit 2 third refueling outage.

4. Pages 67, 68 and 69 - From the information previously submitted it has been determined that full-stroke exercising of the accumulator discharge valves is impractical from a flow standpoint. The only other means of full-stroke testing these valves, of which we are aware of, is to remove the valve bonnet and physically exercise these valves. This is impractical from a radiation exposure standpoint. Alabama Power Company anticipates that approximately 3.5 manrems of exposure would be used to disassemble, exercise and reassemble each valve. This results in approximately 21 manrems of exposure for these six valves, which directly conflicts with the NRC's ALARA requirements. In addition, disassembly of these valves would have to be conducted with the reactor vessel water level at mid-plane which could significantly extend the critical path outage time requirement for normal refueling.

During conversations with the NRC Staff on June 29, 1983, it was stated that Alabama Power Company would provide additional information to the NRC supporting permanent relief from full-stroke exercising of valves Q2E21V032A, B, C and Q2E21V037A, B, C. This additional information will be provided to the NRC prior to the end of the Unit 2 third refueling outage.