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F. L. CLAYTON, JR.
Senior Vice President



June 3, 1980

Docket No. 50-364

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

Attn: Mr. A. Schwencer

RE: Radiological Assessment Branch Request for Additional
Information - Joseph M. Farley Nuclear Plant - Unit 2

Gentlemen:

Alabama Power Company submits the enclosed responses to your letter
on the above referenced subject dated May 19, 1980.

If you have further questions, please advise.

Very truly yours,

for *FLC*
F. L. Clayton, Jr.

FLCJr/TNE:aw

Enclosure

cc: Mr. R. A. Thomas
Mr. G. F. Trowbridge

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ENCLOSURE

Alabama Power Company responses to Radiological Questions on Farley Unit 2.

NRC Item 331.1A

The response to 331.1 concerning the spent fuel transfer tube operation is incomplete. Provide the results of your review of the recent Unit 1 survey and conclusions referenced in your March 17, 1979 letter.

APCO Response

As a result of our commitment to I&E Bulletin 78-08, dated November 1, 1978, Alabama Power Company filled the access port adjacent to the fuel transfer tube with solid concrete blocks on Farley Unit 1.

After completing the above modification, a special radiation survey was conducted during the Unit 1 April 1979 refueling outage. The results of the special survey indicated streaming through the cork filled joint between the Unit 1 Containment and Auxiliary Building. After reviewing the results of the special radiation survey, procedure changes were made to post, rope, lock or station individuals at the Auxiliary Building locations necessary to ensure personnel do not enter areas of potential gamma streaming during fuel transfer. Another design modification is scheduled to be completed during the second Unit 1 refueling outage. This modification will add lead bricks for additional access port shielding. After the lead bricks are installed, a special radiation survey will be performed to verify elimination of radiation streaming during transfer of irradiated fuel assemblies.

The Unit 1 design modifications, including the addition of lead bricks for increased shielding will be incorporated into the Unit 2 design. These Unit 2 modifications will be completed before transfer of Unit 2 irradiated fuel assemblies.

NRC Item 331.2

It appears that the quantities of radiation protection equipment in Tables 12.3-1 and 12.3-2 provided for normal station operation is not adequate to meet the anticipated needs of a two unit plant during normal operations, accident conditions, and during major outages that require supplemental workers and extensive work in high radiation areas. You should revise these tables to show equipment adequate to operate a two unit plant. In addition, you should include a table specifying the quantity and types of respiratory protection equipment available.

APCO Response

FSAR Tables 12.3-1 and 12.3-2 will be revised. Section 12.3.2.3 will be revised to add minimum required quantities of respiratory protection devices. These revisions will be incorporated into Amendment 73.

NRC Item 331.2

It is our position that you commit to implement your radiation protection program in accordance with Regulatory Guides 8.2; 8.4; 8.8 (as applicable to operating plants); 8.9; 8.10; 8.13; 8.14; and 8.15 or submit acceptable alternatives. You should revise Section 12.3 of the FSAR to include this information. With regard to your commitment to implement an ALARA program in accordance with Regulatory Guide 8.8, you should:

- a. Identify by title the individual(s) responsible for the ALARA program, and describe how they are placed in the organization, particularly the mechanism for communication with plant management.
- b. Identify by title the individual(s) to be responsible for the independent radiation protection review of design and equipment changes potentially involving significant occupational exposures. Provide the health physics education and experience of each such individual. Describe formal arrangements for assuring that adequate independent radiation protection reviews are performed, and that adequate records are kept to document the completion of each such review.

APCO Response

FSAR Section 12.3 will be revised to commit to applicable portions of Regulatory Guides 8.2; 8.4; 8.10; and 8.13.

FSAR Section 12.3.1.4 presently commits to applicable portions of Regulatory Guide 8.8. Alabama Power will designate the Chemistry & Health Physics Supervisor as the individual responsible for the ALARA program. Section 12.3.1.2.d will be modified to require formal radiation protection reviews of appropriate design changes.

With respect to Regulatory Guide 8.9, Alabama Power commits to the methodology described for computing the dose effect of radionuclide uptake. However, since there is currently no regulatory requirement for internal dose assessments, Alabama Power is of the opinion that a commitment to perform such dose assessments is inappropriate at this time.

With regard to Regulatory Guide 8.14, Alabama Power contracted with Oak Ridge National Laboratory and Lawrence Livermore Laboratory to study the neutron radiation spectrum at Farley Unit 1. Both studies (conducted independently) concluded that available neutron film would not be sensitive to the neutron spectrum at FNP. Alabama Power conducted its own experimentation with Landauer neutron film. No neutron radiation was detected, even in known high neutron radiation areas, because the neutron spectrum at Farley is well below the sensitivity level of available neutron film and poly-carbonate. Therefore, with the concurrence of the NRC Region II Radiation Support Section, no neutron dosimetry program was implemented at Farley Unit 1. Since Farley Unit 2 is physically a mirror image of Unit 1, it is the position of Alabama Power Company that neutron dosimetry is not necessary at Farley Unit 2. Calculation of neutron exposures will be made using portable neutron instruments and stay time.

FSAR Section 12.3.2.3 presently commits to Regulatory Guide 8.15.

NRC Item 331.4

The individual listed as Chemistry & Health Physics Supervisor is no longer on the plant staff. You should update Section 13.1.3.2.7 to provide information for the current incumbent. The individual functioning as Health Physics Supervisor must meet the qualifications for a Radiation Protection Manager (RPM) recommended in Regulatory Guide 1.8, "Personnel Selection and Qualification", Section 13.1.3.1 should be revised to show these qualifications.

APCO Response

FSAR Section 13.1.3.2.7 will be revised for the current incumbent. FSAR Section 13.1.3.1 will be revised per Regulatory Guide 1.8.

NRC Item 331.5

It is our position that the Health Physics Foreman and Technicians meet the qualification requirements of Regulatory Guide 1.8 which references ANSI 18.1. Section 13.1.3.1 of the FSAR should be revised to reflect such qualifications. Section 4. of ANSI 18.1 lists position qualifications that include education, training and experience as elements leading to qualification. In addition, the experience referenced must be in the individual's speciality, which in this case would be radiation protection.

APCO Response

The intent of the current FSAR Section 13.1.3.1 is to comply with ANSI 18.1-1971. Section 13.1.3.1 will be revised to clarify this intent.