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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 17 TO FACILITY OPERATING LICENSE NO. NPF-2

ALABAMA POWER COMPANY

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT NO. 1

DOCKET NO. 50-348

## Introduction

Alabama Power Company (APCO), the licensee for the Joseph M. Farley Nuclear Plant, Unit No. 1, proposed changes to Operating License No. NPF-2. These changes are included in APCO letters dated October 15, 1979 (modified by letter dated October 3, 1980), and October 23, 1979. Our followup action to our May 1, 1980 letter approving the Safeguards Contingency Plan is also discussed herein. The license changes included in this amendment and discussed below are as follows:

1. Revised Administrative Controls Technical Specifications for entry into high radiation areas;

2. Added feedwater control system bypass valves response times to Technical Specifications; and

3. Added license condition relating to the approved "Joseph M. Farley Nuclear Contingency Plan." This condition is a followup action to our May 1, 1980 letter which approved the plan.

ADMINISTRATIVE CONTROLS FOR HIGH RADITION AREAS
(Specification 6.12 and 6.12.2)

## Discussion and Evaluation

By letter of October 15, 1979, APCO proposed changes to the Administrative Controls Technical Specification for entry into high radiation areas. Entry into high radiation areas requires positive control of personnel within those areas. Conditions for each entry should be prepared in a manner which is both logical from the standpoint of good radiation protection practice and unambiguous so that each of the alternative methods for control of entry will provide reasonable protection of personnel. The current Standard Technical Specifications (STS) has been written to clearly address the manner in which radiation protection practice may be exercised for positive control for entry into high radiation areas. The APCO submittal of October 15, 1979 falls short of this practice for the following reasons:

(1) Specification 6.12.1.(a) as APCO proposed would provide ffor a "control device" or "alarm signal" required by paragraph 20.203(c)(2) of 10 CFR 20. The control device of paragraph 20.203(c)(2)(i) is not applicable to most radiation sources in nuclear power reactors. Paragraph 20.203 (c)(2)(ii) requires a control device to energize a conspicuous visable or audible alarm signal. The APCO proposal falls short of positive control of access into high radiation areas since the proposed system can either be de-energized by personnel, or, if used by itself with no other control device, could be ignored by personnel. Paragraph 20.203(c)(2)(iii) is an alternative addressed in our STS which has all the connotations of unambiguous positive access control. Therefore, Specification 6.12.1.(a) as proposed is acceptable.

(2) Specification 6.12.1.(b) as proposed by APCO also does not provide positive access control. Pocket ionization chambers are unacceptable as survey meters since they are personnel dosimeters and should be used as such unless no survey meters are available. They are after-the-fact monitoring systems and, therefore cannot be considered positive control devices for determining stay time (i.e., their response is too slow for measurement of dose rate in areas where the dose rate may be rapidly changing). Also audible warning devices (e.g., chirpers) require some skill in interpretation of chirp rate as a function of dose rate and must also operate in a low noise area. The sum of the two instruments (i.e., pocket chamber plus chirper) is therefore not equal to or reliabile as a good radiation survey meter. Consequently, proposed Specification 6.12.1.(b) is unacceptable.

(3) Proposed Specification 6.12.1.(c)(d) is acceptable since it conforms to the STS Section 6.12.1.(a) and (b).

(4) Proposed Specification 6.12.1.(e) is acceptable since it conforms to the STS with the addition of "...by the Health Physics supervisor." The Specification approved for Farley is 6.12.1.(c).

The approved changes will provide a clear definitive condition of positive access control for entry into high radiation areas when the radiation levels are in excess of 1000 mR/hr. This action considers the case where it is not reasonable to provide locked enclosures for small areas having radiation levels in excess of 1000 mR/hr. Such areas may be located in much larger areas such as a pressurized water reactor containment. The conditions for entry into such areas require radiation level measurements in the area and delineation of maximum allowable stay-times in addition to use of barricades, posting and flashing lights as the alternative for locked enclosures. Positive exposure control can also be made by <u>continuous</u> surveillance over the activities within the area by personnel qualified in radiation protection.

Conclusion

The approved, modified Technical Specifications 6.12.1 and 6.12.2 replace the existing specifications and are acceptable. Changes to the APCO proposed revision were discussed with and agreed to by APCO staff.

FEEDWATER CONTROL SYSTEM BYPASS VALVES RESPONSE TIMES
(Specification Table 3.3-5)

Discussion and Evaluation

By letter of October 23, 1979, APCO proposed addition of three feedwater ccontrol system valves (FCV-479, FCV-489 and FCV-499) to Technical Specification Table 3.3-5. These valves were installed as bypass control valves in parallel with the main feedwater control valves (FCV-478, FCV-488 and FCV-498) during the first refueling outage which was completed in late October 1979.

This system modification was accomplished by APCO under 10 CFR 50.59. Bypass control valves provide a means of operating the steam generator level control system at low reactor power levels. The larger size of the main feedwater control valves preclude the use of the main valves at relatively low reactor power levels. Thus, the bypass control valves should result in improved system performance and should result in fewer reactor trips and system transients.

APCO proposed changes to the Technical Specifications to add the bypass control valves to Table 3.3-5 where the main feedwater control valves are shown. This will assure that response time testing is accomplished in a manner consistent with the main feedwater control valves.

Conclusion

Based on the discussion above, we conclude that the added requirement to perform surveillance testing on the bypass control valves is acceptable. FFurther, the testing is similar to testing previously approved on the main feedwater control valves and gives added assurance of valve operability as required by Technical Specification 3.3.2.1, a Limiting Condition for Operation.

CONTINGENCY PLAN LICENSE CONDITION

Discussion

By letter dated March 23, 1979 APCO submitted a Safeguards Security Contingency Plan for the Joseph M. Farley Nuclear Plant as required by

10 CFR 50.34(d) and 10 CFR 73.40. The plan was revised to meet the criteria established by Appendix C to 10 CFR Part 73 and was formulated per Regulatory Guide 5.54 as a self contained plan.

In response to our letter dated August 31, 1979, APCO provided a draft, proposed amendment to the plan by letter of October 8, 1979. Further, in response to our letter dated February 12, 1980, APCO provided in their March 28, 1980 letter, a completely revised text incorporating all previous changes. Our letter dated May 1, 1980 approved the plan as revised. Under provisions of 10 CFR 2.790(d) the plan is being withheld from public disclosure.

Conclusion

Based on our review of the revised Contingency Plan for the Joseph M. Farley Nuclear Plant, we have concluded that the plan for this facility, when fully implemented, will provide the protection needed to meet the general performance requirements of 10 CFR 50.54(p) and 73.40(b) and the objectives of the specific requirements of 10 CFR 73.55(h) and Appendix C to 10 CFR 73. We, therefore, further conclude that your Safeguards Contingency Plan is acceptable.

Changes which would not decrease the effectiveness of your approved Safeguards Contingency Plan may be made without approval by the Commission pursuant to the authority of 10 CFR 50.54(p). A report containing a description of each change shall be furnished to the Director, Office of Nuclear Reactor Regulation, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, with a copy to the appropriate NRC Regional Office within two months after the change is made. Records of changes made without Commission approval shall be maintained for a period of two years from the date of the change.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: December 10, 1980