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Alabama Power
the southern electric system

February 15, 1984

Docket Nos. 50-348
50-364

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

Attention: Mr. S. A. Varga

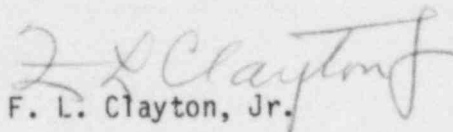
Joseph M. Farley Nuclear Plant - Units 1 and 2
Response to Generic Letter 83-28, Sections 2.2.1 and 3.2

Gentlemen:

In letter dated November 4, 1983 Alabama Power Company submitted its response to Generic Letter 83-28 regarding the NRC position on the Salem anticipated transient without scram (ATWS) events. This submittal contained a preliminary response to Sections 2.2.1 and 3.2 of Generic Letter 83-28. Attached is Alabama Power Company's final response to these sections.

If you have any questions, please advise.

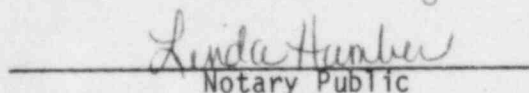
Yours very truly,


F. L. Clayton, Jr.

FLCJr/RGW:ddr-D41
Attachment

cc: Mr. R. A. Thomas
Mr. G. F. Trowbridge
Mr. J. P. O'Reilly
Mr. E. A. Reeves
Mr. W. H. Bradford

SWORN TO AND SUBSCRIBED BEFORE ME
THIS 15th DAY OF February, 1984


Notary Public

My Commission Expires: 1-10-87

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Attachment

NRC Request

2.2 EQUIPMENT CLASSIFICATION AND VENDOR INTERFACE (PROGRAMS FOR ALL SAFETY-RELATED COMPONENTS)

Position

Licensees and applicants shall submit, for staff review, a description of their programs for safety-related* equipment classification and vendor interface as described below:

1. For equipment classification, licensees and applicants shall describe their program for ensuring that all components of safety-related systems necessary for accomplishing required safety functions are identified as safety-related on documents, procedures, and information handling systems used in the plant to control safety-related activities including maintenance, work orders, and replacement parts. This description shall include:
 1. The criteria for identifying components as safety-related within systems currently classified as safety-related. This shall not be interpreted to require changes in safety classification at the systems level.
 2. A description of the information handling system used to identify safety-related components (e.g., computerized equipment list) and the methods used for its development and validation.
 3. A description of the process by which station personnel use this information handling system to determine that an activity is safety-related and what procedures for maintenance, surveillance, parts replacement, and other activities defined in the introduction to 10CFR50, Appendix B, apply to safety-related components.
 4. A description of the management controls utilized to verify that the procedures for preparation, validation, and routine utilization of the information handling system have been followed.

* Safety-related structures, systems and components are those that are relied upon to remain functional during and following design basis events to ensure (1) the integrity of the reactor coolant boundary, (2) the capability to shut down the reactor and maintain it in a safe shutdown condition, and (3) the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the guidelines of 10CFR Part 100.

5. A demonstration that appropriate design verification and qualification testing is specified for procurement of safety-related components. The specifications shall include qualification testing for expected safety service conditions and provide support for the licensees' receipt of testing documentation to support the limits of life recommended by the supplier.
6. Licensees and applicants need only to submit for staff review the equipment classification program for safety-related components. Although not required to be submitted for staff review, your equipment classification program should also include the broader class of structures, systems, and components important to safety required by GDC-1 (defined in 10CFR Part 50, Appendix A, "General Design Criteria, Introduction").

APCo Response 2.2

- 2.2.1 The program for identifying safety-related systems and components at Farley Nuclear Plant (FNP) is embodied within plant procedures, design organization procedures, the Alabama Power Company (APCo) Operations Quality Assurance Policy Manual (OQAPM) and Section 17.3 of the APCo FSAR.
 - 2.2.1.1 Structures, systems and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public are classified as safety-related. The criteria used by APCo related to the classification of components as safety-related within systems previously classified as safety-related are as follows:
 - a. The FNP Q-List specifies safety-related systems. In addition, major components, supports, etc., for these systems are contained in the Q-List, FSAR Section 17.3. This Q-List identifies those structures, systems and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. The Q-List also identifies categories of components as safety-related when such components are not explicitly listed within the Q-List.
 - b. For the purposes of maintenance, operations, or surveillance activities within safety-related systems, all components, subcomponents and structural supports are normally considered as safety-related.

- c. For the purpose of determining quality requirements for procurement of components or subcomponents, a determination of the safety classification of each component or subcomponent is made in accordance with the criteria of FNP Administrative Procedure FNP-O-AP-9.

2.2.1.2 Information Handling System Description

The systems utilized to identify safety-related components by APCo and APCo design organizations consist of:

- (1) the Q-list (Chapter 17.3 of the FNP FSAR)
- (2) safety-related classification numbering
- (3) design documents
- (4) prior procurement packages

The major aspects of these systems are discussed below.

The Q-List is a master list of safety-related systems and major components, structures, etc. for the systems. The Q-List was described in 2.2.1.1 above.

Safety-related classification numbering consists of the Total Plant Numbering System (TPNS) component identifications, ASME class designation for piping, and a unique identification system for electrical cable and raceway. The TPNS identifies components of systems designated as safety-related; nonsafety-related components requiring special attention with respect to engineering and procurement; and nonsafety-related components not requiring special attention. This unique number includes a "Q" or "N" prefix, a unit designator, a three-character code for identifying the system, and additional characters which identify the component type and unique component identification. Safety-related components and nonsafety-related components requiring special attention receive a "Q" prefix. Included within the TPNS listing with a "Q" prefix are Class 1E electrical system components. For components identified as nonsafety-related which do not require special attention, an "N" prefix is assigned. ASME class designation for piping consists of a code which includes piping size (in inches), a three character code (which identifies the pipe pressure rating, material, and if applicable, the ASME class) and additional characters which uniquely identify the piping in question. The electrical cable and raceway identification system provides for determination of safety-related classification, train designation, location and voltage.

Design documents include the FNP Master Parts Index, Instrument Index, design drawings, and equipment specifications. Safety-related classification numbering for components, piping, and electrical systems is included in these documents.

Prior procurement packages, consisting of the equipment purchase order, test reports, certifications, etc. provide information which may aid in the determination of a component or subcomponent's safety classification.

Information Handling System Development and Validation

Included herein is a description of the development and control of each element of the system (described above) used to identify safety-related components and subcomponents for FNP.

The Q-List was developed by the APCo design organizations (i.e., Bechtel Power Corporation, Southern Company Services, Inc., and Westinghouse Electric Corporation) and was reviewed and accepted by the NRC as a part of original FNP licensing. Changes and additions to this list are precipitated as a result of design changes which are issued by the APCo design organizations which include safety classification validation as part of the review. The Q-List (FSAR Section 17.3) is controlled as a part of the FSAR update and control process.

Safety-related classification numbering is assigned by the APCo design organizations as a part of the design process. This numbering is included in appropriate design documents developed during original plant design and/or developed/modified as a result of post-operational design changes and/or additions. Validation of the safety-related classification numbering is performed by the APCo design organizations in accordance with design control procedures.

Design documents and revisions thereto are developed, issued, and revised by the APCo design organizations in accordance with design control procedures. These procedures require validation of design document adequacy. These design documents are controlled by the APCo design organizations and by APCo.

Prior procurement packages developed by the APCo design organizations are controlled within APCo. Validation of the adequacy of these packages is performed as a part of the APCo design organizations' design control process. Requirements for procurement packages initiated by APCo are determined by a review of initial procurement packages provided by the APCo design organizations and by guidance provided in APCo procedures. Questions originated by APCo during this process are referred to the APCo design organizations for resolution.

- 2.2.1.3 Plant personnel determine that components are safety-related from examination of the documentation or safety-related classification numbering described in Section 2.2.1.2. All activities performed on safety-related systems and components are normally considered safety-related. Safety-related activities such as maintenance, surveillance, parts replacement, etc. are governed by plant procedures which are clearly designated as "Safety-Related". Safety-related procedures are developed, reviewed, and approved in accordance with plant administrative controls and the FNP Technical Specifications. A description of the various categories of safety-related procedures is contained in Section 13.5 of the FSAR.
- 2.2.1.4 The management controls utilized to verify that procedures for preparation, validation and routine utilization of the information handling system have been followed consist of the quality assurance programs of APCo and the APCo design organizations. These programs provide for formalized verification of procedural compliance via review and audit programs internal to each organization. Also, periodic audits of the APCo design organizations' quality assurance programs and activities related to safety-related classification are conducted under the purview of APCo's Safety Audit and Engineering Review group to evaluate the effectiveness of the program.
- 2.2.1.5 Procurement procedures require utilization of the information handling system to identify components as safety-related. For safety-related items, procurement procedures provide for the review of design documents and prior procurement packages to identify the applicable quality requirements. These quality requirements would include, as appropriate, design verification, qualification testing and the documentation needed to substantiate the vendor's compliance with design and qualification testing. Such provisions were originally specified by APCo design organizations. This review is conducted by assigned engineering personnel. Quality requirements identified by this process are then specified in procurement documents.

The engineering review further determines whether the item under consideration is required to be qualified for expected service conditions by comparing the item being procured to a controlled listing of environmentally qualified components established by design organizations. If the item is found to require environmental qualification, specifications are included in the procurement document which require documented compliance to a specified test report which serves as the basis for the item's qualification.

In addition to the above review, procurement specifications and documentation requirements are reviewed by the Nuclear Generation Department Staff to verify correct and complete determination of procurement requirements. Any supplier who furnishes safety-related components or subcomponents for FNP must be approved by the APCo Safety Audit and Engineering Review Department.

2.2.1.6 This group of equipment was discussed as a subset of the description provided to 2.2.1.2 above.

NRC Request

3.2 POST-MAINTENANCE TESTING (ALL OTHER SAFETY-RELATED COMPONENTS)

Position

The following actions are applicable to post-maintenance testing:

1. Licensees and applicants shall submit a report documenting the extending of test and maintenance procedures and Technical Specifications review to assure that post-maintenance operability testing of all safety-related equipment is required to be conducted and that the testing demonstrates the equipment is capable of performing its safety functions before being returned to service.
2. Licensees and applicants shall submit the results of their check of vendor and engineering recommendations to ensure that any appropriate test guidance is included in the test and maintenance procedures or the Technical Specifications where required.
3. Licensees and applicants shall identify, if applicable, any post-maintenance test requirements in existing Technical Specifications which are perceived to degrade rather than enhance safety. Appropriate changes to these test requirements, with supporting justification, shall be submitted for staff approval.

APCo Response

- 3.2.1 APCo has verified that FNP procedures covering Technical Specification surveillance testing, other testing and maintenance require appropriate post-maintenance operability testing of safety-related components before the system is returned to service. It is APCo's opinion that such testing demonstrates the equipment is capable of performing its safety functions before being returned to service.

- 3.2.2 Vendor and engineering recommendations (including technical manuals, bulletins, etc.) were considered in the initial development of test and maintenance procedures for FNP. Notification of equipment recommendations is made by Westinghouse Electric Corporation for NSSS equipment. Such notification is formally acknowledged by APCo and incorporated as appropriate into FNP operating, maintenance and test procedures.

APCo operates FNP under Standard Technical Specifications developed and issued by the NRC. As a result, APCo is unable to determine if appropriate vendor and engineering recommendations were included in the FNP Technical Specifications.

APCo has not conducted a detailed formal review of all technical specification testing requirements to determine if testing requirements adequately reflect vendor and engineering recommendations. In the normal conduct of operations at FNP, APCo has in some instances determined that Technical Specification requirements are in conflict with vendor and engineering requirements and have been found to be detrimental or not conducive to reliable operations. Examples of such changes which have received NRC approval are Diesel Generator Testing (T.S. Section 3/4.8.1) and Governor Valve Testing (T.S. Section 3/4.3.4).

- 3.2.3 Alabama Power Company has reviewed post-maintenance test requirements in existing Technical Specifications and has not identified any which are perceived to degrade rather than enhance safety.