



**Florida
Power**
CORPORATION

January 22, 1988
3F0188-21

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72
Revised Response To Generic Letter 83-28, Item 2.2.1

Dear Sir:

Florida Power Corporation (FPC) submitted a revised response to Generic Letter 83-28, Item 2.2.1 in our December 22, 1987 letter (3F1287-19).

A revision to subitem 2.2.1.3 was not included in the December 1987 letter as we intended, and we are resubmitting our response to Item 2.2.1 with this correction included. The revised part of subitem 2.2.1.3 has been marked with a vertical line in the right margin.

This letter represents FPC's position regarding Item 2.2.1 and supersedes all previous submittals for this item. Should you have any questions concerning this subject, please contact this office.

Sincerely,

E. C. Simpson, Director
Nuclear Operations Site Support

ECS/JWT/sdr

xc: Dr. J. Nelson Grace
Regional Administrator, Region II

Mr. T. F. Stetka
Senior Resident Inspector

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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 10 CFR 50, 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.
 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 10CFR50, Appendix A, "General Design Criteria, Introduction").

Response

1. FPC has in place and is maintaining programs to ensure that all components of safety-related systems necessary for accomplishing required safety functions are identified and result in the establishment of a programmatic system which contains the 5 elements required in NRC Generic Letter 83-28 for equipment classification programs. The following items address the programmatic elements:

1. The criteria for identifying components as safety-related within systems currently classified as safety-related is as follows:
 - A. Does the item/service assure the integrity of the reactor coolant system boundary (i.e., "pressure retaining" as defined in the ASME Boiler and Pressure Vessel Code)?
 - B. Does the item/service assure the capability to shut down the reactor and to maintain it in a safe shutdown condition?
 - C. Does the item/service assure the capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposure comparable to those referenced in 10 CFR 100.11?

Any "yes" answer to one of these questions will result in the classification of the system, structure, or component as safety-related.

The "Safety Listing" is reviewed by design personnel during the modification process to determine if the modification affects safety-related structures, systems, or components. The result of this review is documented and included in the modification package. The entire process is controlled by the Nuclear Engineering Procedures Manual. All new structures, systems, or components being added to CR-3 are evaluated. Subcomponents, subassemblies, etc. within safety-related systems may be re-evaluated at the discretion of the Design Engineer to determine the individual item's safety classification. In all cases, the criteria employed to determine the safety classification is as identified above.

2. FPC uses a controlled "Safety Listing" to tabulate components whose classification has been evaluated. The "Safety Listing" presently is a manual data base listing of structures, systems, and components by tag number or description along with the applicable safety classification.

The "Safety Listing" is controlled by the Nuclear Engineering Procedures Manual. As such, Nuclear Engineering personnel are responsible for all activities associated with the control and maintenance of the "Safety Listing."

All potential changes to the "Safety Listing" are initiated by a Design Engineer, verified by a Verification Engineer, and approved by a Nuclear Engineering Supervisor. Documentation of such evaluation is required via the use of standardized forms which are treated as

"quality documents." Upon completion and approval of the evaluation, any evaluation which requires a change to the "Safety Listing" is forwarded to Nuclear Engineering Assurance for review and processing per Nuclear Engineering Procedures. Final approval of formal "Safety Listing" updates is provided by the Manager, Nuclear Operations Engineering. As a controlled document, an approved standard distribution is established which assures that changes/additions/deletions are provided to holders of the "Safety Listing" in a timely manner.

The original "Safety Listing" was developed by Gilbert Associates, Inc. (GAI), the original A/E for CR-3, under the cognizant responsibility of FPC Nuclear Engineering. While the development was performed under GAI's QA and Design Control Procedures, input was obtained from the FPC Nuclear Engineering discipline (Electrical, I&C, Mechanical, Structural) personnel, plant staff personnel, and Quality Programs personnel. The final "Safety Listing" was issued under approval signature of each FPC responsible discipline engineer, the Manager, Nuclear Engineering, and the Manager, Production Engineering. GAI used the criteria, identified below, in the preparation of the original "Safety Listing." GAI defined a safety-related structure, system, or component as one whose satisfactory performance is required:

- a. To prevent accidents that could cause undue risk to the health and safety of the public; or
- b. To mitigate the consequences of such accidents should they occur; or
- c. To support and maintain the safety shutdown of the plant; or
- d. A reactor coolant system pressure boundary.

NOTE: The criteria for a and b was 10CFR100.11.

The following Regulation, Regulatory Guide, National Standards, and references were used as applicable in the performance of safety classification evaluations at CR-3:

- a. 10 CFR Part 50
- b. Regulatory Guide 1.26
- c. ANSI N18.2a-1975
- d. ANSI N271-1976
- e. IEEE 308
- f. CR-3 FSAR and Facility Operating License including the Technical Specifications.

These documents are currently used to perform safety classifications along with other documents such as ASME Section XI and ASME Section III which are referenced in the "Safety Listing."

As part of FPC's configuration management program, it is anticipated that the "Safety Listing" will be automated. The administrative controls for authorizing changes to the "Safety Listing" will not be reduced.

3. Plant personnel use the "Safety Listing" to determine if an activity is safety-related during the activity planning stage. Plant Operating Quality Assurance Manual (POQAM) Compliance Procedure (CP)-113, "Handling and Controlling Work Requests and Work Packages" requires all Work Requests (WRs) identify that the activity involves safety-related or non-safety-related components. This review is performed by the plant planners and documented on the WR by checking the appropriate box and stamping "safety-related" on the form. CP-113 provides specific instructions to the planners to use the "Safety Listing" to make this determination. Since all maintenance at CR-3 is done by WRs, this review ensures that maintenance, spare parts, and post-maintenance testing are performed with approved procedures in accordance with CR-3 Technical Specification requirements and NRC commitments.

Before work commences, the Work Supervisor is required by CP-113 to signify that he is satisfied the WR is complete and accurate by signing or initialing the "Supervisor Concur" block on the WR form. This review provides an independent review of the WR as to its safety-related or non-safety-related status.

The responsible Work Supervisor is required by CP-113 to ensure that safety-related parts or components, including consumables, are installed in safety-related systems or components. If safety-related parts are not available, CP-113 directs the Work Supervisor to the Nuclear Procurement and Storage Manual (NPSM), Section 9.1, Material Qualification Form (MQF) for further action. This requirement assures only properly qualified replacement parts are used on safety-related WRs.

POQAM Administrative Instruction (AI)-401, "Origination of and Revisions to POQAM Procedures," requires the use of the "Safety Listing" on all procedures to determine if the statement "THIS PROCEDURE ADDRESSES SAFETY-RELATED COMPONENTS" is to be placed on the procedure cover sheet.

4. The management controls utilized to verify the procedures for preparation, validation, and routine utilization of the "Safety Listing" have been followed are:
 - a. Nuclear Engineering supervisory approval of changes to the "Safety Listing."
 - b. Nuclear Engineering Assurance review of all changes to the "Safety Listing."
 - c. Nuclear plant supervisory approval of all work requests.

- d. Manager, Nuclear Operations Engineering, approval of Nuclear Engineering Procedure changes and formal updates to the "Safety Listing."
 - e. Audits by Quality Programs Department of maintenance and design control activities.
5. Florida Power Corporation's demonstration that appropriate design verification and qualification testing is specified for procurement of safety-related components can be separated into two parts.

First, the method by which replacement parts are ordered for equipment that has been deemed qualified for the environment in which it is installed.

Second, the method by which new equipment is ordered.

In both cases, the procedures that govern all material transactions at Crystal River Unit 3 are contained in the Nuclear Procurement and Storage Manual. The environmental parameters for safety-related electrical equipment are contained in Florida Power Corporation "Environmental & Seismic Qualification Program Manual" (ESQPM) in the form of zone maps. The zones within the plant are broken into two basic categories, i.e., harsh and mild.

For replacement parts of qualified equipment, the Nuclear Procurement and Storage Manual permits the use of the "Catalog" method of procurement which represents a safety-related commercial grade method. The replacement part is ordered and configured to the original item which includes the requirement that configured item meet the testing requirements of the original.

For the new equipment that requires qualification testing, the Nuclear Procurement and Storage Manual requires the use of the "Specification" method of procurement which represents a nuclear grade method invoking 10CFR50 Appendix B and 10CFR21. The technical requirements of the purchase would include the environmental parameters (both design basis events and normal) in which the equipment must operate using the ESQPM zone maps. Engineering software in the form of an Equipment Qualification Report is required to be submitted for acceptance prior to shipment. The report is reviewed for compliance with the requirements of 10CFR50.49 for harsh environments.

6. The equipment classification program for safety-related components is as described above. FPC has two classifications, safety-related and non-safety-related. We do not agree that plant structures, systems, and components important to safety constitute a broader class than the safety-related set. We nevertheless believe that non-safety-related plant structures, systems, and components have been designed, and are maintained, in a manner commensurate with their importance to the safe and reliable operation of the plant.