

Draft Input for Safety Evaluation Report

Crystal River Unit No. 3

Docket No. 50-302

13.0 Conduct of Operations

13.1 Plant Organization, Staff Qualifications and Training

The Crystal River Unit 3 nuclear plant staff will consist of approximately 80 full time employees, not including clerical and security force personnel. The plant is under the onsite supervision of the Nuclear Plant Superintendent who reports to a General Plant Superintendent who in turn reports through the Production Superintendent to the Asst. Vice President - System Operations. The Nuclear Plant Superintendent is directly responsible for the safe operation of the facility. The nuclear plant staff consists of an Assistant Plant Superintendent responsible for operations, maintenance, technical support and nuclear engineering, a Compliance Engineer responsible for auditing of operational and maintenance quality, a Chemistry and Radiation Protection Engineer responsible for the health physics program and plant water chemistry and an Administrative Supervisor in charge of clerical help, security and building servicemen.

The Operations Engineer who reports to the Assistant Plant Superintendent is responsible for directing the day-to-day operation of the plant operating shifts. The minimum operating shift complement is one Shift Supervisor licensed as a Senior Reactor Operator, one Chief Operator and one Control Center Operator licensed as Reactor Operators, two Assistant Control Center Operators and one Equipment Operator. The Chemistry and Radiation Protection Engineer who reports to the Nuclear Plant Superintendent has reporting to him a staff of approximately 8 persons including a Health Physics Supervisor and an Assistant Chemistry and Radiation Protection Engineer. The Maintenance Engineer reports to the Assistant Plant Superintendent and has a staff of approximately 18 persons and is responsible for mechanical and non-instrument related electrical equipment. The Technical Support Engineer reports to the Assistant Plant Superintendent and has a staff of approximately 12 persons including a Computer and Controls Engineer, a Technical Support Supervisor and a Results Engineer and is responsible for all control and information systems in the nuclear plant. The Nuclear Engineer reports to the Assistant Plant Superintendent and has a staff of three persons reporting to him and is responsible for core performance and core analysis.

The applicant has conducted a training program for most operating personnel which consists of six phases: 1) academic training, 2) nuclear instrumentation training and research reactor training, 3) nuclear plant observation and participatory experience, 4) nuclear plant design training, 5) nuclear plant simulator training, and 6) on-site training and testing. Selected members of the plant staff technical support groups completed formal training specifically oriented to their assigned responsibilities.

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The qualifications of key supervisory personnel with regard to educational background, experience, training and technical specialties have been reviewed and conform to those defined in Regulatory Guide 1.8, Personnel Selection and Training (ANSI N18.1, "Selection and Training of Nuclear Power Plant Personnel").

Technical support for the plant staff is primarily provided by the Production Department's Plant Performance Section, Maintenance Section, Chemical and Environmental Surveillance Section, Nuclear Section, and Fuels Manager. In addition, assistance can also be obtained from approximately 79 employees of Generation Engineering and Construction Management.

We have concluded that the organizational structure, the training and qualifications of the staff for the Crystal River Unit 3 are adequate to provide an acceptable operating staff and technical support for the safe operation of the facility. During initial startup, the plant staff will be augmented in the areas of operations management, technical support, chemistry and radiation protection and shift operations. In addition, technical assistance for the startup will be provided by Babcock and Wilcox, relative to the Nuclear Steam Supply System.

13.2 Safety Review and Audit

The safety review and audit for the Crystal River Unit 3 will be conducted by the Plant Review Committee and the General Review Committee. The Plant Review Committee is advisory to the Nuclear Plant Superintendent and will review all safety related procedures and design modifications. The General Review Committee provides corporate management with a review and audit capability to verify that organizational checks and balances are functioning to assure continued safe operation and design adequacy of the plant. The General Review Committee will function in accord with Regulatory Guide 1.33 (ANSI N18.7, "Standard for the Administrative Controls for Nuclear Power Plants" Section 4.). Detailed features of the review and audit program will be incorporated in the Administrative Controls Section of the applicant's Technical Specifications.

We conclude that the provisions for the review and audit of plant operations are acceptable.

13.3 Plant Procedures and Records

Plant operations are to be performed in accordance with written and approved operating and emergency procedures. Areas include normal startup, operation and shutdown, abnormal conditions and emergencies, refueling, safety related maintenance, surveillance and testing, and radiation control. All procedures and changes thereto will be reviewed by the Plant Review Committee and approved by the Nuclear Plant Superintendent prior to implementation. Plant records to document appropriate station operations and activities will be maintained by the applicant. Plant procedures and record keeping have been reviewed against Regulatory Guide 1.33 (ANSI N18.7, "Standard for Administrative Controls for Nuclear Power Plants").

We conclude that the provisions for preparation, review, approval, and use of written procedures and record keeping are satisfactory. Detailed features regarding plant procedures and the records management program will be incorporated in the Administrative Controls Section of the applicant's Technical Specifications.

14.1 Test and Startup Program

Florida Power Corporation has overall responsibility for the supervision and performance of the test and startup program. The development, planning, scheduling and execution of the test program is administered by a Test Working Group (TWG). The test working group is presently comprised of six members of FPC, one B&W member, and one member of GAI A/E organization. The FPC Manager Power Testing is Chairman of the TWG. The Nuclear Plant Superintendent is responsible for all plant operational activities.

The preoperational and startup test procedures are initially developed by FPC, Babcock and Wilcox and other independent agents as required. They are then distributed by the Manager Power Testing to various groups for review and then finalization by a Test Procedure Review Group. The Plant Review Committee will review safety related procedures. Test procedures are valid for distribution and use only after approval by the Director - Generation Engineering. Test results are reviewed by the Test Working Group and safety related test results by the Plant Review Committee. The Manager - Power Testing makes the determination that a system test is complete and acceptable.

We conclude that the organization for and administrative controls relative to the initial tests and operation are satisfactory.

Documents Used by Operational Safety Branch
in SAR Chapters 12.0 and 13.0 Review

Regulatory Guide 1.8, "Personnel Selection and Training," March 10, 1971.

ANSI N18.1-1971, "Standard for Selection and Training of Personnel for Nuclear Power Plants".

Regulatory Guide 1.33, "Quality Assurance Program Requirements" (Operation), November 3, 1972.

ANSI N18.7-1972 (ANS 3.2), "Standard for Administrative Controls for Nuclear Power Plants".

USAEC "Guide to the Preparation of Emergency Plans for Production and Utilization Facilities", December 1970.

Regulatory Guide 1.17, "Protection of Nuclear Power Plants Against Industrial Sabotage", June 1973.

Safety Guide 17, "Protection Against Industrial Sabotage", October 27, 1971.

ANSI N18.17-1973 (ANS 3.3), "Industrial Security for Nuclear Power Plants".

USAEC "Guide for the Planning of Preoperational Testing Programs", December 7, 1970

USAEC "Guide for the Planning of Initial Startup Programs", December 17, 1970.