13.0 CONDUCT OF OPERATIONS

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13.0 CONDUCT OF OPERATIONS

13.1 ORGANIZATIONAL STRUCTURE OF SOUTHERN NUCLEAR OPERATING COMPANY

13.1.1 CORPORATE ORGANIZATION

This section describes the structure and qualifications of Southern Nuclear Operating Company's (SNC's) corporate organization and the corporate organizations of the principal contractors: Bechtel Power Corporation and Westinghouse Electric Company. Technical qualifications of SNC and the principal contractors are also described in section 1.4.

HISTORICAL

[The construction phase corporate organizations of Southern Company Services (SCS), Bechtel, Westinghouse, and Fluor Constructors International, Inc.(FCII) (formerly Daniel Construction) are shown in figures 17.1-1, 17.1-3, 17.1-4, and 17.1-5, respectively.]

13.1.1.1 Corporate Functions, Responsibilities, and Authorities

SNC, as operator of Farley Nuclear Plant, is solely responsible for plant design, construction, quality assurance, testing, operation, and all other plant activities.

Alabama Power Company (APC) is the sole owner of FNP.

Southern Company Services, Inc. (SCS), an affiliated service company, served as the original architect-engineer. As a result of the consolidation of SCS and SNC nuclear expertise, and in addition to being the licensee, SNC also serves as its own architect/engineer and performs the functions previously performed by SCS. SNC is responsible for engineering and design of all portions of the plant except the switchyard and transmission system, which is designed by APC.

Bechtel Power Corporation is retained by SNC to assist in the engineering and design of the major portions of the plant, primarily the containments and auxiliary buildings.

Westinghouse Electric Corporation was contracted by APC to design and fabricate the nuclear steam supply systems and initial cores for FNP. Westinghouse was contracted to provide startup services during the preoperational test program at FNP.

The overall project quality assurance program and the programs of each of the principal contractors for the various plant activities are described in detail in the appropriate sections of chapter 17.

The responsibility for preoperational and startup testing was assigned to APC's nuclear generation organization. Advice and assistance was available from the vendors' engineers and startup specialists and from the engineering design groups and consultants. Details of the testing program are contained in chapter 14.

The responsibility for operation and maintenance is assigned to SNC.

13.1.1.2 Interrelationships with Contractors and Suppliers

The working interrelationships and organizational interfaces between the organizations described in paragraph 13.1.1.1 are described below.

SNC is responsible for coordinating and approving plant engineering and design. This includes design concepts, detail designs, specifications, and drawings whether developed by Bechtel, Westinghouse, or internally at SNC. SNC may call upon Bechtel or Westinghouse to provide comments on specifications and drawings affecting the Bechtel-Westinghouse interface.

Final acceptance by SNC of design concepts, documents, and equipment suppliers is based on recommendations from the responsible designers and consultation with the APC PGS, Purchasing, and Nuclear Oversight Department, as appropriate.

Construction and modifications to the plant are the responsibility of SNC. Onsite construction activities are monitored by SNC site management and Nuclear Oversight personnel, as appropriate.

The interrelationships and interfaces that existed between the various organizations during startup and preoperational testing are described in subsection 14.2.2.

The responsibility for ensuring that equipment suppliers and contractors conform to approved specifications is retained by the design organizations, although all equipment is procured by SNC. Conformance is verified through implementation of the quality assurance program described in the SNC Quality Assurance Topical Report (QATR).

13.1.1.3 Licensee's Technical Staff

The nuclear operations organization, under the supervision of the president/CEO, has direct responsibility for the operation and maintenance of Southern Company’s nuclear plants. The nuclear operations organization consists of the plant operating staffs and corporate management, planning and performance, and quality assurance. Engineering support is provided primarily by the corporate and site engineering organizations as described herein.

The president and CEO, executive vice president, and vice president-Farley provide line management direction for the operation of the plant. The plant staff personnel are highly qualified to perform their responsibilities. The SNC corporate support staff consists of the Senior VP - Operations and the Engineering - VP and their associated staffs.

The structure of the nuclear operations organization is described in the SNC Quality Assurance Topical Report (QATR). Portions of the SNC Fleet Operations, Engineering, General Counsel and External Affairs, and Human Resources organizations are also described in the following paragraphs, or in the QATR.

13.1.1.3.1 Vice President and General Counsel

The vice president and general counsel reports to the president/CEO. This individual is responsible for the legal compliance and external affairs activities associated with operation of SNC plants. The vice president and general counsel is also the corporate secretary and directs the managing attorney/compliance manager.

13.1.2 OPERATING ORGANIZATION

The description of the operating organization in this section is for a two-unit operation. Any differences between one- and two-unit operations will be noted. The operating organization is described in the QATR, except for those positions described below.

13.1.2.1 Operations Group

The operations director, who reports to the plant manager, is responsible for the management and coordination of operations activities of the plant. Reporting to him/her are the operations Support Manager, the Operations Services Manager, and the Shift Operations Manager. He/she performs outage management functions as directed by the plant manager.

The operations director is responsible for the day-to-day operation of the plant in a safe and efficient manner in compliance with the operating license. The operations director is responsible for developing normal, emergency, and refueling operating procedures, department training, and retraining programs.

The plant operations managers are responsible for administering surveillance, coordinating investigation of personnel and equipment incidents, and for the on-shift operations staff including procedure development and coordination of shift clerks.

The shift manager reports to the shift operations manager. The shift managers are the senior management representatives of each shift and are responsible for safe and efficient operation of the plant.

The shift supervisor is in direct charge of his/her unit, including startup, power operations, and shutdown. He/she will initiate immediate action in the event of an abnormal situation to avoid violation of the operating license, to avert possible injury or undue radiation exposure of personnel, or to prevent damage to plant equipment.

The shift supervisor has the responsibility of supervising the actions of the station operators (plant operators, systems operators) to ensure safe and prudent operation of the facility.

He/she will initiate immediate corrective action in any abnormal situation until assistance, if required, arrives.

The plant operators, who are supervised by the shift supervisor, control and direct the operation of their assigned unit according to detailed procedures. Normally, one plant operator will be assigned to each unit's main control center.

The shift support supervisor reports to the shift supervisor and assists in supervision of the system operators and equipment systems control. The shift technical advisor advises the shift supervisor during emergency conditions and has no command and control functions.

The shift technical advisor function meets the intent of NUREG-0660, as clarified by NUREG-0737, item I.A.1.1. The shift technical advisor position may be eliminated when the qualifications of the shift manager, shift supervisor, or SRO-licensed shift support supervisor meet the requirements of the shift technical advisor function.

The systems operators, who work under the direction of the shift support supervisor and shift supervisor, inspect, service, and operate plant equipment.

13.1.2.2 Reactor Engineering Group

The reactor engineering group, under the supervision of the reactor engineering supervisor, is responsible for the evaluation of reports on reactivity, reactivity coefficients, boron concentration, control rod positions, reactivity worths, assisting in evaluating the fuel management program, assisting operations department in refueling operations, and developing various startup procedures, operating procedures and refueling procedures, originating any procedures involving tests on the reactor, periodically determining fuel composition and burnup, determining proper fuel loading sequences, and evaluating and determining control rod worths and operations sequences.

13.1.2.3 Supervisory Succession

The vice president-Farley is responsible for operation, maintenance, and technical support of FNP. In the absence of the vice president-Farley, the following members of the plant staff, in the order listed below, will assume this responsibility:

A. Plant manager.

B. Plant operations director.

C. Regulatory affairs manager.[a]

D. Other designated manager.

E. Shift manager.

F. Shift supervisor.

13.1.2.4 Shift Crew Composition

The FNP will be operated from one central control room. A shift supervisor will be directly responsible for the safe and efficient operation of each unit.

The normal shift complement for two-unit operation is as follows:

	Unit 1	Unit 2	Common
Shift manager (SRO)	-	-	1
Shift supervisor (SRO)	1	1	-
Shift support supervisor [d]	-	-	3
Shift technical advisor	-	-	1[b]
Plant operator (RO)	2	2	-
Systems operator[c]	2	2	3

The above manning levels are for normal two-unit operation. Deviations may be made as long as the minimum manning and license requirements of the Technical Specifications are met.

---

a. The person filling this position may act as the plant manager provided this person meets the requirements of ANSI N18.1-1971 Section 4.2.1, FSAR paragraph 13.1.3.1.1, and has completed emergency director training.

b. May be provided by senior licensed operators assigned other functions who meet the shift technical advisor qualifications.

c. Although the systems operator will not be required to hold a reactor operator's (RO) license, he will be required to participate in regularly scheduled operator training programs and actively pursue a RO license. He will be trained and qualified in the operation of all auxiliary equipment and will work under the direction of a licensed operator. An individual qualified in radiation protection procedures shall be onsite when fuel is in the reactor.

d. The shift support supervisor is not required to have a RO or senior reactor operator's (SRO) license unless the individual is fulfilling the duties of another staff position that requires RO or SRO qualification.

13.1.3 QUALIFICATION REQUIREMENTS FOR NUCLEAR FACILITY PERSONNEL

13.1.3.1 Minimum Qualification Requirements for All Plant Personnel

Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions and the supplemental requirements specified in 10 CFR 55, except for the senior individual in charge of Radiation Protection who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975. Personnel who complete an accredited program which has been endorsed by the NRC shall meet the requirements of the accredited program in lieu of the above.

The following qualification requirements, used as a general guideline for personnel assignments, meet or exceed the minimum requirements set forth in the American National Standards Institute document N18.1-1971, Standard for Selection and Training of Personnel for Nuclear Power Plants.

13.1.3.1.1 Vice President-Farley / Plant Manager (Note 1)

A. A baccalaureate degree in an engineering or scientific field generally associated with power production.

B. A total of 10 years of power plant experience, of which a minimum of 3 years is nuclear power plant experience. Four of the remaining 7 years may be fulfilled by academic training generally associated with power production on a one-for-one basis.

C. Have acquired experience and training required for a senior operator's license.

Note 1: See ANSI N18.1-1971 for allowances if one or more of the requirements is not met for the vice president-Farley or plant manager.

13.1.3.1.2 Not used.

13.1.3.1.3 Regulatory Affairs Manager

A. A baccalaureate degree.

B. A total of 10 years of power plant experience of which a minimum of 3 years is nuclear power plant experience. Four of the remaining 7 years may be fulfilled by academic training generally associated with power production on a one-for-one basis.

C. In lieu of "A" and "B" above, the Regulatory Affairs Manager may also meet the same requirements of Operations Director per FSAR paragraph 13.1.3.1.4.

13.1.3.1.4 Operations Director

A. High school education or equivalent.

B. A total of 8 years of power plant experience, of which a minimum of 3 years is nuclear power plant experience. Two of the remaining 5 years may be fulfilled by academic or technical training on a one-for-one basis.

C. The operations director or at least one operations manager shall hold a USNRC SRO license. If not currently licensed, the operations director shall have previously held a USNRC SRO license.

13.1.3.1.5 Shift Manager, Shift Supervisor, Operations Managers, and Shift Support Supervisors

A. High school education or equivalent.

B. A total of 4 years of power plant experience, of which a minimum of 1 year is nuclear power plant experience. A maximum of 2 years of the remaining 3 years of plant experience may be fulfilled by academic or related technical training on a one-for-one basis.

C. The shift manager and shift supervisor shall hold a USNRC SRO license. Also, the operations director or at least one operations superintendent shall hold a USNRC SRO license.

D. The shift support supervisor is not required to have a RO or SRO license unless the individual is fulfilling the duties of another staff position that requires RO or SRO qualification.

13.1.3.1.6 Plant Operator

A. High school education or equivalent.

B. A total of 2 years of power plant experience, of which a minimum of 1 year is nuclear power plant experience.
C. USNRC RO license.

13.1.3.1.7 Systems Operator

A. High school education or equivalent.

B. A total of 6 months of power plant experience or applicable experience.

13.1.3.1.8 Deleted

13.1.3.1.9 Maintenance Director and Maintenance Managers

A. High school education or equivalent.

B. A minimum of 7 years of responsible power plant experience or applicable industrial experience, of which a minimum of 1 year is nuclear power plant experience.

C. A maximum of 2 of the remaining 6 years of power plant or industrial experience may be fulfilled by satisfactory completion of academic or related technical training on a one-for-one basis.

D. Nondestructive testing familiarity, craft knowledge, and an understanding of electrical, pressure vessel, and piping codes.

13.1.3.1.10 Maintenance Supervisors

A. High school education or equivalent.

B. Four years of maintenance experience in a power plant or applicable industrial experience.

13.1.3.1.11 Mechanical Maintenance Personnel

A. Three years of power plant maintenance experience or applicable industrial experience.

13.1.3.1.12 Electrical Maintenance Personnel

A. Three years of electrical maintenance experience in a power plant or applicable industrial experience.

13.1.3.1.13 Instrumentation and Control Technician

A. High school education or equivalent.

B. Five years of experience in instrumentation and control, of which a minimum of 6 months is in nuclear instrumentation and control.

C. A minimum of 2 of the 5 years of experience should be related technical training.

D. A maximum of 4 of this 5 years of experience may be fulfilled by related technical or academic training.

13.1.3.1.14 Control Technician

A. Two years of working experience in instrumentation and control.

13.1.3.1.15 Instrument Serviceman

A. Two years of working experience in instrumentation and control.

13.1.3.1.16 Deleted

13.1.3.1.17 Chemistry Manager/Chemistry Shift Operations Superintendent

A. High school education or equivalent.

B. A total of 5 years of experience in chemistry and environmental surveillance at a nuclear reactor facility, of which a minimum of 1 year of the chemistry experience is in radiochemistry.

C. A minimum of 2 of this 5 years of experience should be related technical training.

D. A maximum of 4 of this 5 years of experience may be fulfilled by related technical or academic training.

13.1.3.1.18 Radiation Protection Manager/Radiation Protection Support Superintendent/Radiation Protection Operations Superintendent

A. High school education or equivalent. In addition, this person should have a baccalaureate degree or the equivalent in a science or engineering subject, including some formal training in radiation protection.

B. At least 5 years of professional experience in applied radiation protection. (A master's degree may be considered equivalent to 1 year of professional experience, and a doctor's degree may be considered equivalent to 2 years of professional experience where course work related to radiation protection is involved.)

C. At least 3 years of this professional experience should be in applied radiation protection work in a nuclear facility dealing with radiological problems similar to those encountered in nuclear power stations, preferably in an actual nuclear power station.

13.1.3.1.19 Chemistry Supervisor/Radiation Protection Supervisor/Chemist/Health Physicist

A. High school education or equivalent.

B. Five years of experience in specialty (chemistry or radiation protection).

C. A minimum of 2 of this 5 years of experience should be related technical training in specialty (chemistry or radiation protection).

D. A maximum of 3 of this 5 years of experience may be fulfilled by a related technical or academic training.

13.1.3.1.20 Chemistry Technician and Radiation Protection Technician

A. Two years of experience in specialty (chemistry or radiation protection).

B. One year of training in the areas of chemistry, radiochemistry, or radiation protection principles or successful completion of the FNP chemistry and radiation protection technician course.

13.1.3.1.21 Engineering Director

A. A baccalaureate degree in engineering or the physical sciences.

B. A total of 8 years of responsible experience in power plant design or operation, of which a minimum of 1 year is in nuclear power plant experience.

C. A maximum of 4 of this 8 years of experience may be fulfilled by related technical or academic training.

13.1.3.1.22 Engineering Systems Manager

A. A baccalaureate degree in engineering or the physical sciences.

B. A total of 8 years of responsible experience in power plant design or operation, of which a minimum of 1 year is nuclear power plant experience.

C. A maximum of 4 of this 8 years of experience may be fulfilled by related technical or academic training.

13.1.3.1.23 Work Management Director

A. A high school education or equivalent.

B. A total of 8 years of responsible experience, at least 1 year of which should be nuclear power plant experience.

C. A maximum of 4 of this 8 years of experience may be fulfilled by related technical or academic training.

13.1.3.1.24 Engineering Supervisor-Programs, Engineering Supervisors-Mechanical and Electrical/I&C, Engineering Manager-CMO, Engineering Supervisor-Mechanical/Civil Design, Engineering Supervisor-Electrical Design, Engineering Supervisor-I&C/Digital Design, and Engineering Manager-EFIN

A. A high school education or equivalent. (A baccalaureate degree in engineering or the physical sciences is highly desirable and is required for the supervisor with responsibility for reactor engineering.)

B. A total of 8 years of responsible experience in power plant design or operation, of which a minimum of 1 year involves nuclear power plant design or operation.

C. A maximum of 4 of this 8 years of experience may be fulfilled by related technical or academic training.

13.1.3.1.25 Design Engineering Manager

A. A baccalaureate degree in engineering or the physical sciences.

B. A total of 8 years of responsible experience in power plant design or operation, of which a minimum of 1 year is in nuclear power plant experience.

C. A maximum of 4 of this 8 years of experience may be fulfilled by related technical or academic training.

13.1.3.1.26 Deleted

13.1.3.1.27 Deleted

13.1.3.1.28 Training Director

A. A high school education or equivalent.

B. A total of 4 years nuclear power plant experience of which a minimum of 1 year is nuclear power plant training experience. One of the remaining years may be fulfilled by academic or technical training on a one-for-one basis.

13.1.3.1.29 Facilities Supervisor

A. High school education or equivalent.

B. Sufficient maintenance or operational work experience to provide: a good knowledge of plant layout and functional operation, and an understanding of radiation protection regarding decontamination activities.

13.1.3.1.30 Deleted

13.1.3.2 Qualifications of Plant Personnel

The Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants, Revision 3, dated November 1978, Section 13, "Conduct of Operations," states: "This chapter of the SAR should provide information relating to the preparations and plans for operation of the plant." "Its purpose is to provide assurance that the applicant will establish and maintain a staff of adequate size and technical competence and that operating plans to be followed by the Licensee are adequate to protect public health and safety."

It should be noted the original purpose of identifying the specific qualifications of plant personnel in paragraph 13.1.3.2 was to assist the NRC staff in determining that Alabama Power Company had established an adequate staff to operate the facility. The NRC staff completed the review and has determined that the operating staff which was established is adequate as evidenced by the issuance of the Operating Licensees for Units 1 and 2. The purpose of paragraph 13.1.3.2

has, therefore, been accomplished and there is no further need to continually update the resumes previously contained therein. The resumes have therefore been deleted.

Paragraph 13.1.3.1 specifies the minimum qualification requirements for all plant personnel, and thereby fulfills the mandate of assuring "that the applicant will maintain...a staff of adequate size and technical competence...to protect public health and safety."

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SOUTHERN COMPANY
Energy to Serve Your World©

JOSEPH M. FARLEY
NUCLEAR PLANT
UNIT 1 AND UNIT 2

ALABAMA POWER COMPANY
GENERAL ORGANIZATION

FIGURE 13.1-1

THIS FIGURE HAS BEEN DELETED.

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JOSEPH M. FARLEY
NUCLEAR PLANT
UNIT 1 AND UNIT 2

POWER DELIVERY DEPARTMENT

FIGURE 13.1-2

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JOSEPH M. FARLEY
NUCLEAR PLANT
UNIT 1 AND UNIT 2

CONSTRUCTION DEPARTMENT
ORGANIZATION

FIGURE 13.1-3

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JOSEPH M. FARLEY
NUCLEAR PLANT
UNIT 1 AND UNIT 2

SOUTHERN NUCLEAR OPERATING COMPANY
OFFSITE ORGANIZATION

FIGURE 13.1-4

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JOSEPH M. FARLEY
NUCLEAR PLANT
UNIT 1 AND UNIT 2

OFFSITE ORGANIZATION FOR FACILITY MANAGEMENT AND TECHNICAL SUPPORT

FIGURE 13.1-5

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JOSEPH M. FARLEY
NUCLEAR PLANT
UNIT 1 AND UNIT 2

FACILITY ORGANIZATION

FIGURE 13.1-6

THIS FIGURE HAS BEEN DELETED.

13.2 TRAINING PROGRAM

Responsibility for administration of the overall training program for FNP rests with the vice president-Farley. Training programs administered at the plant site are supervised by the training manager. He/she is responsible to the vice president-Farley for ensuring that operations training, technical/maintenance, and plant access training maintain the educational level adequate for safe and efficient operation of the plant. The training program shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI N18.1-1971 and 10 CFR 55, and shall include familiarization with the relevant operational experience. In lieu of ANSI N18.1-1971 requirements, the training program shall meet the requirements of an accredited program endorsed by the NRC.

13.2.1 PROGRAM CONTENT FOR OPERATIONS PERSONNEL

13.2.1.1 Operator License Training Program

The Operator License Training Program contains three phases and is presented on a level required for senior reactor operator.

Reactor operator (RO) license candidates and senior reactor operator (SRO) license candidates, with or without engineering degrees, attend this program. The Operator License Training Program satisfies the training requirement stipulated in ANSI N18.1-1971.

The three phases of operator license training are as follows:

A. Fundamental training

This phase of the program provides license candidates training in the areas of math, physics, chemistry, electrical theory, heat transfer/fluid flow, thermodynamics, reactor theory, and radiological protection.

B. Specialized training

This phase provides training in the areas of plant fluid, electrical, and instrumentation/control systems including fuel handling; procedures, technical specifications, and integrated plant operations including mitigating core damage and transient/accident analysis; and simulator training on FNP's Unit 1 plant-referenced simulator which includes reactor startups, shutdowns, and power operation during normal, transient, and accident conditions. Plant-specific procedures are used extensively during this portion of training.

C. On-the-Job training

During this period the student is assigned to various licensed operator crew positions and is required to perform day-to-day routine evolutions including a minimum of five reactivity manipulations while under the supervision of an RO or SRO licensed individual.

13.2.1.2 License Continuing Training Program

The License Continuing Training Program is designed to maintain a base level of knowledge through the use of a systematic approach to training (SAT). Farley's License Continuing Training Program received accreditation in December 1984 and accreditation is renewed at the frequency recommended by the National Academy for Nuclear Training.

The program meets or exceeds the requirements of 10 CFR 55. It is conducted on an SRO level.

The scope of the program is described in the applicable Training Center Procedures. Examinations are conducted to satisfy requirements of 10 CFR 55.

Each individual must demonstrate that he/she has adequately learned the material presented by passing the examinations required by 10 CFR 55. If an individual does not meet the passing criteria on any part of an examination required by 10 CFR 55, the individual will be removed from licensed duties and placed in a remedial program to correct his/her deficiencies.

The individual will be reexamined and must successfully meet the previously described passing criteria prior to resuming licensed duties.

If an exam or quiz is given that is not part of the exams required by 10 CFR 55 and if an individual scores less than the passing criteria, then he/she will be remediated and/or retested as deemed appropriate by training supervision.

The Simulator Continuing Training is based on a systematic approach to training (SAT) and is part of the accredited training program.

Integral with simulator continuing training, the trainee is given an annual simulator operational evaluation consisting of an overall operational ability demonstration. The trainee is also given an annual operational evaluation of job performance measures. Any deficiencies observed are discussed with the student, and corrective actions are given in a post training critique. The student will be removed from licensed duties if individual deficiencies result in failure of critical tasks during the simulator operational examination or job performance measures.

The student must be remediated and reexamined prior to resuming licensed duties.

13.2.1.3 System Operator Training Program (Nonlicensed Operator)

The System Operator Training Program contains three phases of training: classroom lecture and system qualification requirements.

The three phases of system operator (SO) training are as follows:

A. SO Fundamentals

This phase provides training in the areas of math, physics, thermodynamics, radiation protection, electrical theory, reactor theory, power plant equipment, communications, fire brigade, and OJT/OJE evaluator training.

B. Plant Systems

This phase provides training on plant fluid and electrical systems applicable to the duties of the SO. Included in this training are appropriate procedures and instructions on watch standing techniques and fire brigade training.

C. On-The-Job Training

This phase allows the student to complete the appropriate system qualification requirements. The student is also required to participate in routine shift activities such as equipment monitoring and observation, log taking, etc.

13.2.1.4 System Operator Continuing Training Program (Nonlicensed Operator Continuing Training)

The Systems Operator Continuing Training Program is designed to maintain a base level of knowledge through the use of a systematic approach to training (SAT). Farley's License Continuing Training Program received accreditation in December 1984 and accreditation is renewed at the frequency recommended by the National Academy for Nuclear Training.

Comprehensive written examinations shall be given to determine trainees' knowledge of subjects covered in the continuing training program. Quizzes may be used to determine the effectiveness of training. If an individual scores less than the passing criteria on a quiz, then he/she will be remediated and/or retested as deemed appropriate by training supervision. Operational exams will be given consisting of job performance measures. A score of 80 percent or greater must be achieved on the written exam and the JPM exam for successful completion of the continuing training program. Systematic observation and evaluation of the performance and competency of personnel shall be conducted by shift supervision.

13.2.2 PROGRAM CONTENT FOR TECHNICAL AND MAINTENANCE PERSONNEL

13.2.2.1 Radiation Protection Technician Training

Radiation Protection technicians will attend a formal training program. Technicians will normally complete this course during their first year of employment. However, they may be exempted from such training on the basis of previous training or job experience. Program courses will cover mathematics, nuclear physics, principles of radiation detection and protection, responsibilities and duties of radiation protection group personnel, radiation biology, plant systems, water chemistry, radioactive waste processing, gamma ray spectrometry, and on-the-job training.

13.2.2.2 Chemistry Technical Training

Chemistry technician IIs will attend a formal training program. Technician IIs will normally complete this training during the first year of employment. However, they may be exempted from such training on the basis of previous training or job experience. Program courses will cover responsibilities and duties of chemistry and environmental personnel, basic chemistry, corrosion, sampling considerations during normal plant operations and accident conditions, water purification and treatment, sewage treatment, chemistry technical specifications and limits, instrumental analysis and analytical procedures, plant chemistry control problems, group responsibilities required to support emergency activities, and on-the-job training.

13.2.2.3 Instrumentation and Control Training Program

Instrumentation and control group personnel will attend a formal training program. However, individuals may be exempted from such training on the basis of previous training, education, or job experience. Program courses will cover basic electricity and electronics; fundamentals of pressure; temperature; level and flow measurement and control; NSSS instrumentation such as 7300, SSPS, DRPI, rod control, incore and excore; primary and secondary plant systems; and on-the-job training.

13.2.2.4 Mechanical Maintenance Training Program

Mechanical maintenance group personnel will attend a formal training program. However, individuals may be exempted from such training on the basis of previous training, education, or job experience. Program courses will cover piping systems, diesel generators, rotating machinery, lubrication, machinery balancing, vibration and alignment, principles of rigging, hydraulics, primary and secondary plant systems, and on-the-job training.

13.2.2.5 Electrical Maintenance Training Program

Electrical maintenance group personnel will attend a formal training program. However, individuals may be exempted from such training on the basis of previous training, education, or job experience. Program courses will cover basic electricity fundamentals, single and three-phase motors, dc motors, ac and dc circuits, batteries, switchgear and protective devices, primary and secondary plant systems, and on-the-job training.

13.2.2.6 Vendor Supplied Training Courses

Personnel from the plant engineering, maintenance, and technical staff may attend training courses supplied by offsite vendors. Examples of this training are computer systems courses and station nuclear reactor engineer training courses.

13.2.3 PROGRAM CONTENT FOR PLANT ACCESS TRAINING

13.2.3.1 Radiological Health and Safety

All persons assigned to the plant who are granted unescorted access to the radiation controlled area will attend radiation protection and safety training. This training will be reviewed and updated as required and will be presented to plant personnel on a regularly scheduled basis. A typical outline of the program includes nuclear plant terminology, biological effects of radiation, plant specifics, 10 CFR 19 and 10 CFR 20, nonoccupational sources of radiation, warning signs and hazards, use of protective clothing, and frisking for contamination.

13.2.3.2 Emergency Plan Training

Training will be given on a regularly scheduled basis. The material presented will be relevant to the job requirements of each individual. Copies of the plant emergency plan will be available for review by all plant personnel.

13.2.3.3 Security Plan Training

Training covering the FNP security plan will be given on a regularly scheduled basis to appropriate plant personnel.

The material presented will be relevant to the job requirements of all individuals. Persons directly involved with the administration and implementation of the plan will receive adequate initial training, continuing training, and auditing to ensure the continued effectiveness of the plan.

13.2.3.4 Industrial Safety

Training covering industrial safety and health will be given on a regularly scheduled basis to appropriate plant personnel. A typical outline includes accident prevention, general plant safety, and SNC Safety and Health Policies and Procedures related to safety, including the Southern Nuclear Company Safety and Health Manual.

13.2.3.5 Plant Access Training (Continuing)

Appropriate plant personnel will be given training on a regularly scheduled basis covering the following subjects. The material presented in the training will be relevant to the individual's job requirements.

A. Emergency Plan implementing procedures.

B. Radiological health and safety.

C. Farley Nuclear Plant security plans.

Examinations should be given to determine the knowledge of subjects covered in the retraining.

13.2.4 RECORDS

A record of the person's qualifications and general records of correspondence and certifications will be maintained. Also, items such as examination results, continuing training examinations, training attendance, drill participation, and results of remediation administered in areas in which personnel have exhibited deficiencies will be maintained. Initial operator license training, license continuing training, and remediation files will be maintained in accordance with 10 CFR 55.

All of these records will be used to judge the effectiveness of the FNP initial training and continuing programs. The plant supervisory staff and the plant training staff will periodically review in detail each individual's progress in the plant training program. The plant supervisory staff and the plant training staff will also periodically review all accredited programs to determine how well these programs are supplying and maintaining qualified personnel to safely and efficiently operate Farley Nuclear Plant.

13.3 EMERGENCY PLANNING

The purpose of the Standard Emergency Plan and Annex for Farley Nuclear Plant (FNP) is to fulfill the requirements set forth in Appendix E, Emergency Planning and Preparedness for Production and Utilization Facilities, of 10 CFR 50, Domestic Licensing of Production and Utilization Facilities, with the fundamental objective of protecting the health and safety of the general public, persons temporarily visiting or assigned to the plant, and plant employees.

NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, was used as a guide in developing the contents of the Standard Emergency Plan and Annex for FNP. Detailed procedures concerning the implementation of the emergency plan are included in the emergency plan implementing procedures. In accordance with the latest requirements set forth in Supplement 1 to NUREG-0737, the emergency plan fully describes the functions of the Emergency Operations Facilities.

13.4 REVIEW AND AUDIT

A program of in-plant and independent reviews and audits has been developed to provide a system to determine that plant design, construction, startup, and operation are consistent with company policy and rules, approved procedures, and license provisions; to ensure that unusual events are promptly investigated and corrected in a manner which reduces the probability of recurrence of such events; and to detect trends which may not be apparent to a day to day observer. For convenience of administration of the program, the review and audit program is divided into the construction phase and the test and operation phase.

[HISTORICAL] [13.4.1REVIEW AND AUDIT - CONSTRUCTION

Review and audit during design and construction of the Farley Nuclear Plant (FNP) is a part of the quality assurance program which is described in Section 17.1. This program does not utilize a formal review and audit committee, as such; however, through a comprehensive system of planned audits, compliance with all aspects of the quality assurance program is verified. Audits are performed on the design organizations, the construction site, and vendor facilities. The review and audit function during design and construction is fully described in Section 17.1.]

13.5 PLANT PROCEDURES

Actions concerning structures, systems, or components of the Farley Nuclear Plant (FNP) that are safety related are conducted according to written approved procedures. Safety-related structures, systems, and components are those that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public and such structures, systems, or components that are essential for the safe shutdown of the plant.

These procedures are written in sufficient detail so that a qualified individual may perform the required function without direct supervision. Procedures will contain the following significant aspects wherever they apply to the intent of each particular procedure:

A. Title - A concise descriptive statement concerning the activity covered in the procedure. Safety-related procedure titles are available in Document Control.

B. Purpose - A concise descriptive statement concerning the purpose and scope of the procedure.

C. References - Plant procedures, instructions, drawings, technical manuals, reports, the Final Safety Analysis Report, or other plant documents which contain information related to the procedure.

D. Precautions - Actions which if not taken or events which if not avoided when performing the procedure could result in hazardous personnel conditions or damage to plant equipment. Precautions will also appear in the main body of the procedure where applicable.

E. Prerequisites - Independent actions or procedures which shall be completed and plant conditions which shall exist prior to the procedure's use.

F. Limitations - Statements specifying limits on the parameters being controlled.

G. Main body - Step-by-step instructions in the degree of detail necessary to perform the required function or task.

H. Checkoff lists - Lists included in complex procedures requiring the person either performing or supervising the activity being performed to signify by his initials when important procedure steps have been completed.

I. Technical specifications - A reference to plant technical specifications where appropriate.

J. Symptoms - For emergency procedures, symptoms shall be included to aid in the identification of the emergency. They should include significant alarms, operating conditions, and, where possible, probable magnitudes of parameter changes.

K. Automatic actions - The automatic actions that will probably occur as a result of an emergency should be identified.

L. Immediate operator actions - For emergencies, steps should be specified for operation of controls or confirmation of automatic actions that are required to stop the degradation of conditions and mitigate their consequences.

M. Probable cause - For alarms the probable cause should be specified.

N. Acceptance criteria - The qualitative and/or quantitative criteria against which an evaluation of acceptability may be made. In certain procedures, the acceptance criteria will reference other sections of the procedure such as precautions, limitations, or checkoff list which may fulfill the acceptance criteria requirements.

Some procedural steps are required to be committed to memory, while others, which are routine actions, may be implied but not actually delineated.

Typical categories of plant procedures are as follows:

A. Administrative procedures.

B. Unit operating procedures.

C. System operating procedures.

D. Annunciator response procedures.

E. Critical safety function procedures.

F. Abnormal operating procedures.

G. Fuel handling procedures.

H. Surveillance test procedures.

I. Chemical and radiochemical control procedures.

J. Maintenance procedures.

K. General maintenance procedures.

L. Instrument maintenance procedures.

M. Radiation control and protection procedures.

N. Emergency Plan implementation procedures.

O. Security procedures.

P. Engineering technical procedures.

Q. Environmental sampling procedures.

R. Fire surveillance procedures.

S. Document control procedures.

T. Special nuclear material procedures.

13.5.1 ADMINISTRATIVE PROCEDURES

The vice president-Farley issues, in the form of standard operating orders, his instructions governing employee actions and established standards for plant operation. These rules and instructions provide a clear understanding of operating philosophy and management policies to ensure safe operation of the plant within the limits set by the facility licenses and the Technical Specifications. They provide that plant activities will be conducted in a manner that will protect the general public, plant personnel, and equipment.

In particular, written administrative procedures are provided to control issuance of documents, to ensure adherence to written procedures, records, and shift scheduling (including limiting working hours in accordance with the Technical Specifications), and to control the writing, approval, and implementation of written plant procedures. Administrative procedures are written, as referenced in the SNC Quality Assurance Technical Report (QATR), to implement certain aspects of the operations quality assurance program. Procedures covering plant operations, maintenance work, tests, equipment changes, radioactivity control, administration, and other activities which might adversely affect safety are put into effect only after being reviewed and approved as specified in subsection 17.2.20. It is the responsibility of the vice president-Farley to ensure that required reviews are completed before procedures are issued.

Permanent changes to procedures follow the same review and approval route as a new procedure. A permanent change is implemented only after formal approval.

Temporary procedures and temporary revisions to procedures are issued to direct operations during testing and maintenance, to provide guidance in unusual situations, and to ensure orderly and uniform operations for short time periods when existing procedures do not apply.

These administrative procedures delineate the general responsibilities and authorities of the plant staff. Instructions have been established to provide methods by which temporary changes to approved procedures can be made, including the designation of persons authorized to approve such temporary changes. In cases of emergency, personnel will be authorized to depart from approved procedures when necessary to prevent injury to personnel or damage to the facility in accordance with the provisions of 10 CFR 50.54 (x) and (y). In all such cases, changes will be documented and reviewed by the appropriate superintendent within 30 days. If appropriate, it will then be incorporated in the next revision of the affected procedure. More detail on the review, approval, changes, revisions, and implementing of procedures is found in the QATR.

Procedures are provided for control of equipment to maintain reactor and personnel safety and to avoid unauthorized operation of equipment. These procedures delineate control measures and actions such as locking, tagging, notification, removal of tags, and identification of equipment.

Standard operating procedures are documented and disseminated to the plant staff. They include such subjects as job turnover and relief, designation of confines of control room, definition of duties of operators and others, transmittal of operating data to management, filing and changing charts, maintaining operating log, and personal belongings carried onsite. Also, there is a mechanism for issuing special orders which have short term applicability and which require dissemination.

A number of programs are in place to ensure that plant procedures are adequate and applicable and to ensure that potential procedural impact is assessed and necessary revisions are made. The following programs, which include but are not limited to those listed below, adequately provide for procedure review and any necessary input to procedure revisions and changes:

- Plant personnel feedback.
- Incident investigation feedback.
- Design modification program.
- Operating experience evaluation program.
- Simulator training program.
- Technical specifications and FSAR revisions.
- Quality assurance program.

Additionally, as a part of the overall quality assurance program, the QA group performs various audits (described in the QATR) to assure that the procedural process is working and that procedures are being properly maintained.

13.5.2 OPERATING PROCEDURES

Operating procedures were written before initial fuel loading and include all the anticipated operating conditions that affect the safety of the plant and the public. These procedures provide a preplanned method of conducting operations to minimize reliance on memory. They cover the following areas: system operating procedures, unit operating procedures, fuel handling procedures, annunciator response procedures, emergency operating procedures, and abnormal operating procedures.

The following types of procedures have been written for the FNP.

13.5.2.1 System Operating Procedures

Instructions for energizing, starting up, shutting down, changing modes of operation, and other instructions appropriate for operations of systems related to the safety of the unit are delineated in system operating procedures. These procedures are concerned with systems and include valve lineup, control operation, and instrumentation within the system boundaries. Where

needed to ensure a safe and proper sequence of operation, a procedure checkoff list is incorporated.

13.5.2.2 Unit Operating Procedures

Unit operating procedures have been written to provide instructions for the integrated operation of the unit. The system operating procedures covered in paragraph 13.5.2.1 were limited to individual systems, but these procedures integrate all auxiliary systems to the main nuclear steam supply system and turbine-generator to perform as a unit.

Unit operating procedures cover plant operation in the following areas.

13.5.2.2.1 Startup Procedures

Startup procedures have been written to provide instructions for starting the reactor from cold or hot conditions and establishing minimum load operation with the generator synchronized to the line. System procedures are referenced as required.

13.5.2.2.2 Shutdown Procedures

Procedures have been written to guide operations during and following controlled shutdown and include instructions for establishing or maintaining hot shutdown or cold shutdown conditions, as applicable. Such actions as monitoring and controlling reactivity, load reduction rates, cooldown rates, taking equipment or systems out of service and/or into service, electrical switching to ensure unit safety, etc., are covered in these procedures. System procedures are referenced as required.

13.5.2.2.3 Power Range Operation Procedures

Procedures have been written for steady-state power operation and load changing and include instructions on the use of control rods, chemical shim, long- and short-term control of reactivity, making deliberate load changes, and adjusting operating parameters to trim power operation. System procedures are referenced as required.

13.5.2.2.4 Reactor Startup Procedures

Procedures have been written to instruct the operator on prerequisites, equipment control, and control functions concerning the reactor in going critical. Actual control manipulations have been included in these written procedures. These procedures are included in the startup procedures described in paragraph 13.5.2.2.1.

13.5.2.3 Abnormal Operating Procedures

Procedures have been written for operation of the unit under abnormal conditions.

13.5.2.4 Annunciator Response Procedures

Procedures have been written to instruct the operator on the proper action to be taken in response to each safety-related annunciator in the control room. These procedures contain annunciator identification, inputs into this annunciator circuit, and logical responses to be taken to ensure corrective action.

13.5.2.5 Fuel Handling Procedures

Fuel handling operations will be performed in accordance with written procedures. These procedures, in conjunction with respective unit operating procedures, specify actions and philosophy for core alterations and partial or complete fueling operations. They include continuous monitoring of the neutron flux throughout core loading, periodic data taking, audible annunciation of abnormal flux increases, duties of personnel assigned to fueling, response actions to alarms during fueling, instructions for proper sequence of events, rules for periods when fueling is interrupted, verification and frequency of sampling to ensure the shutdown margin, communications between control room and the fuel loading station, criteria for stopping fueling and evacuation systems operation, and documentation of final fuel component serial numbers and locations. Prerequisites have been included in these procedures to ensure the status of plant systems is such that fueling can proceed. Specific procedures are written for each fueling to handle those actions and parameters that are unique to that particular refueling. System operating procedures are referenced as required.

13.5.3 MAINTENANCE PROCEDURES

A maintenance program was developed early in plant life to maintain safety-related equipment at the efficiency level required to perform its intended function. This program includes maintenance of safety-related mechanical, instrument, and electrical equipment. Maintenance or modifications which may affect the functioning of safety- related structures, systems, or components are performed to ensure operating quality at least equivalent to that specified in applicable codes, bases, standards, design requirements, materials specifications, and inspection requirements. To ensure a high degree of confidence, appropriate inspection in accordance with applicable standards is performed. Replacement components are used only when the proper quality assurance documents are available or when the required quality assurance can be obtained and documented by inspection and/or testing prior to being placed in service. These quality review measures are documented, and evidence of the documentation is retained.

Maintenance which can affect the performance of safety-related equipment is preplanned and performed in accordance with written procedures, approved documented instructions, and/or approved drawings appropriate to the circumstances. In maintenance situations where related

vendor manuals or instructions or approved drawings do provide adequate instruction to ensure the required quality of work on safety-related equipment, these documents will be used. However, where related vendor manual or instructions or approved drawings do not provide adequate instruction to ensure the required quality of work on safety-related equipment, a suitable procedure to handle this maintenance work will be written. Skills normally possessed by qualified maintenance personnel are not covered in detailed procedures.

When failure occurs to safety-related equipment, the cause of the failure will be evaluated; however, since the probability of failure is usually unknown and the time and mode of failure are usually unpredictable, procedures will not be written for repair of most equipment prior to failure.

A preventive maintenance schedule has been developed which describes the time and type of maintenance to be performed. A preliminary schedule was developed early in plant life and will be refined and changed as experience with the equipment is gained. This schedule specifies equipment inspections, replacement of such items as filters and strainers, and inspection or replacement of parts that have a specific lifetime. As equipment baselines develop, a computer program will be considered to aid in preventive maintenance scheduling. Lubrication requirements will be scheduled separately.

Maintenance is scheduled and planned so as not to jeopardize the safety of the plant. Planning is done in order to consider the possible safety consequences of concurrent or sequential maintenance, testing, or operating activities. Maintenance is performed in such a manner that the license limits are not violated. Planning for maintenance includes evaluation of the use of special processes, equipment, and materials to be used in the performance of the job. This evaluation attempts to assess the potential hazards to personnel and equipment.

Modifications in equipment or systems which might degrade the plant quality will not be permitted.

Procedures to support the maintenance philosophy were written early in plant life. These procedures control plant maintenance activities during operation and at the time of equipment failure.

13.5.4 PERIODIC CALIBRATION AND TEST PROCEDURES

13.5.4.1 Instrument Calibration and Tests

In those instances where equipment technical manuals do not provide sufficient instruction, procedures will be written for periodic calibration and testing of all safety-related plant instrumentation. This instrumentation includes interlocks, alarm devices, sensors, readout instruments, transmitters, signal conditioners, laboratory equipment, key recorders, and protective logic circuits. A list of equipment to be calibrated, a calibration schedule, and calibration records will be kept and maintained by the instrument group. Manuals will be reviewed and procedures written with the intent of ensuring measurement accuracies adequate to keep safety parameters and controls within safety and operational limits. Calibration, testing,

and check of instrumentation channels will be performed as specified in the plant Technical Specifications or the Technical Requirements Manual, as applicable.

13.5.4.2 Safety-Related Surveillance Tests

Safety-related surveillance tests and inspections are performed in accordance with the plant Technical Specifications or the Technical Requirements Manual, as applicable, to ensure that failures or substandard performance do not remain undetected and that the required reliability of safety systems is maintained. Testing of safety-related plant structures, systems, and components is performed in accordance with approved written test procedures which set forth the requirements and acceptance limits. Test procedures contain a description of the test objectives, the acceptance criteria that will be used to evaluate the test results, the prerequisites for performing the tests, including any special conditions to be used to simulate normal or abnormal operating conditions, and the test procedure. These procedures also specify any special test equipment or calibrations required to conduct the surveillance test. A surveillance schedule, reflecting the status of all planned in-plant surveillance testing, was established prior to fuel load. Additional control procedures have been established, as necessary, to ensure timely conduct of surveillance testing, appropriate documentation, reporting, and evaluation of test results.

Records are kept in sufficient detail to permit adequate confirmation of the test program. They identify, as a minimum, the data recorder, results of the test, the acceptability of the results, deviations and their cause or reason, and any corrective action resulting from the test. Significant deficiencies identified by the tests will be reported to management where the deficiencies will be evaluated and the condition corrected in a timely manner.

13.5.5 CHEMICAL AND RADIOCHEMICAL CONTROL PROCEDURES

Procedures have been written for chemical and radiochemical control activities. These procedures include the nature and frequency of sampling and analyses, instructions for maintaining coolant and condensate within prescribed quality limits, and limitations on concentrations of agents that could cause corrosive attack, foul heat transfer surfaces, or become sources of radiation hazards due to activation. These procedures include laboratory instructions and calibration of laboratory equipment.

Sample intervals will be according to the plant Technical Specifications or the Technical Requirements Manual, as applicable.

13.5.6 PROCEDURES FOR COMBATING EMERGENCIES AND OTHER SIGNIFICANT EVENTS

Procedures have been written to guide operations during potential emergencies. They have been written so that a trained operator and crew will know in advance the expected course of events that will identify an emergency and the immediate action which should be taken.

Procedures that cover actions for manipulation of controls to prevent accidents or lessen the consequences are based on a general predictable sequence of observations and actions. Emphasis is placed on operator responses to observations and indications in the control room; that is, when immediate operator actions are required to prevent or mitigate the consequences of a serious condition, procedures delineate and require that these actions be implemented promptly. When initially available intelligence provided to operating personnel via instrument readings, annunciator alarms, physical conditions, and personal observations may not clearly indicate the difference between a simple operational problem and a serious emergency, the actions outlined in the procedures are based on a conservative course of action by the operating crew. The operator will be responsible for believing and responding conservatively to instrument indications unless they are proven to be false. Considerable judgment on the part of competent personnel will be used before departing from the procedure. In events where it is necessary to depart from approved procedures to prevent injury to personnel or damage to the facility, the deviation will be logged with the prevailing circumstances described. Sections of emergency operating procedures that require immediate response action from the operating crew are required to be committed to memory.

13.5.6.1 Events of Potential Emergency

Potential emergency conditions have been identified and procedures for coping with them have been prepared. Some of these procedures include immediate action to be taken, while others may guide operations in correcting an abnormal situation which could lead to an emergency.

13.5.6.2 Procedures for Implementing the Emergency Plan

Implementing procedures for emergency plan actions have been written to instruct all plant personnel in the integrated implementing actions of the emergency plan.

13.5.7 PROCEDURES FOR THE CONTROL OF RADIOACTIVITY

Procedures have been written to provide for personnel exposure control, for the control of radioactive materials on the plant site, and for the control, sampling, monitoring, storage, and disposal of solid, liquid, and gaseous radwastes.

13.5.7.1 Solid Radioactive Wastes Control Program

Written procedures shall be established, implemented and maintained covering the PROCESS CONTROL PROGRAM implementation.

The PROCESS CONTROL PROGRAM (PCP) shall contain the current formulas, sampling, analyses, test, and determinations to be made to ensure that processing and packaging of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure compliance with 10 CFR Parts 20, 61, and 71;

State regulations; burial ground requirements; and other requirements governing the disposal of solid radioactive waste.

The PCP shall be approved by the Commission prior to implementation.

Licensee initiated changes to the PCP:

A. Shall be documented and records of reviews performed shall be retained as required by subsection 13.6.2. This documentation shall contain:

   1. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s), and

   2. A determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State, or other applicable regulations.

B. Shall become effective after review and acceptance by the PRB and the approval of the vice president-Farley.

13.5.8 SECURITY PROCEDURES

Security procedures have been prepared to complement the security plan in describing the security requirements for the FNP and to guide security activities. These procedures were drafted and reviewed by members of the plant security group and are used to guide security activities. Because of the sensitive nature and content of most security procedures, copies will be placed only where required, with access restricted to those plant personnel having a need to know. Security procedures are serially numbered documents which are periodically inventoried and accounted for by the security (site) manager. Procedures are subject to reviews by the security (site) manager whenever a security threat or other security incident makes such a review desirable.

Revisions to procedures are subject to the same review and approval as original procedures.

Revised or obsolete security procedures are processed in accordance with approved plant procedures. Temporary security procedures and temporary revisions to procedures to cover unanticipated or emergency situations may be issued at the direction of the vice president-Farley. Temporary procedures shall reflect the purpose and limitations of their use. Unless declared obsolete and processed in accordance with approved plant procedures, temporary procedures shall be prepared as permanent procedures as soon as practicable.

13.5.9 SPECIAL NUCLEAR MATERIAL ACCOUNTABILITY PROCEDURES

Special nuclear material procedures have been written to implement the special nuclear material accountability program. These procedures delineate personnel responsibilities and authorities, designate and describe item control areas, and provide instructions for special

nuclear material control records and reports, receiving and shipping of special nuclear material, internal transfers, physical inventories, special nuclear material element and isotopic calculations, and special nuclear material review and audit.

13.5.10 ENGINEERING TECHNICAL PROCEDURES

Engineering technical procedures provide instructions for the performance of tests or essential calculations which, because of their nature or technical content, are normally performed by plant engineers. These procedures cover such subjects as reactor core physics tests, calculation of operating curves and data, component or systems performance evaluations, developmental testing, and other related functions.

13.5.11 ENVIRONMENTAL SAMPLING PROCEDURES

Environmental sampling procedures provide methods for measurement of radiation and of radioactive material in those exposure pathways which lead to the highest potential radiation exposures of individuals resulting from operation of the plant.

13.5.12 DOCUMENT CONTROL PROCEDURES

Document control procedures provide guidelines for handling various documents and records.

13.5.13 (Deleted)

13.5.14 FIRE SURVEILLANCE PROCEDURES

Fire surveillance procedures have been written to provide instructions for the testing of fire surveillance equipment to ensure its operability.

13.5.15 FIRE VENTILATION PROCEDURES

Fire ventilation procedures provide symptoms, automatic actions, initial actions, secondary actions, and restoration of systems for ventilation operations initiated and/or required due to a fire.

13.6 PLANT RECORDS

Records documenting the quality of the design, construction, testing, operation, maintenance, and modification of the Farley Nuclear Plant (FNP) are maintained at the plant site. The records maintained comply with the requirements of Criteria XVII of Appendix B of 10 CFR 50 and American National Standards Institute N18.7, Standard for Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants.

These records are stored and maintained in the document control center and satellite document control center which provides facilities to preserve the records in a manner to preclude deterioration. A signout system ensures immediate location of any record that is temporarily removed from the files. Nuclear Oversight is responsible for auditing these quality records as described in the QATR.

13.6.1 PLANT HISTORY

Upon completion of the plant design, construction, and construction testing (Phase I of the FNP testing program), the Power Generation Services (PGS) Department (formerly known as the Construction Department) transferred or disclosed the location of all quality documentation to the plant staff and the Nuclear Oversight group (formerly known as the safety audit and engineering review group). Records not maintained at the plant site are kept at the material supplier's site due to codes or standards requirements or at SNC Corporate.

This documentation and the records generated during Phases II and III of the testing program, operation, maintenance, inspection, modification, and events of the FNP as described in subsections 13.6.2 and 13.6.3 serve as a recorded history of quality plant activities.

13.6.2 OPERATING RECORDS

Safety-related preoperational and startup test records generated during Phases II and III of the testing program are kept at the plant site along with appropriate operating records. These operating records include chemistry records; manuals and procedures; operating, maintenance, and testing records; special nuclear material records; records and reports required by regulatory agencies; and administrative records.

In addition to the applicable record retention requirements of Title 10, Code of Federal Regulations, the following records shall be retained for at least the minimum period indicated.

Operational records and logs that are kept at the plant are considered nonpermanent and shall be retained for at least 5 years, unless a longer period is required by applicable regulations. The following are examples of these type records:

A. Startup problems and resolutions.

B. Records and logs of normal plant operation, including power levels and period of operation at each level.

C. Records and logs of principal maintenance activities, including inspection, repair, substitution, or replacement of principal items of equipment related to nuclear safety.

D. Records of abnormal occurrences and unusual events.

E. Obsolete equipment instruction manuals and drawings.

F. Records of shipment of radioactive material.

G. All reportable occurrences submitted to the Nuclear Regulatory Commission.

H. Records of surveillance activities, inspections, and calibrations required by regulatory agencies or Technical Specifications.

I. Records of changes made to plant procedures.

J. Records of sealed source and fission detector leak tests and results.

K. Records of annual physical inventory of all sealed source material of record.

Operational records that are considered to be of a significant value in demonstrating capability of safe operation, in maintaining, replacing, or repairing an item, in determining the cause of an accident or malfunction of an item, or in providing baseline data for inservice inspection are maintained for the life of the plant. The following are examples of these type records:

A. Applicable plant procedures and drawings.

B. Records of inservice inspections.

C. Records of radiation exposure for all individuals entering radiation control areas.

D. Records of new and irradiated fuel inventory, fuel transfers, and assembly burnup histories.

E. Records and drawing changes reflecting unit design modifications made to systems and equipment described in the Final Safety Analysis Report.

F. Reactor water chemistry data.

G. Records of gaseous and liquid radioactive material released to the environs.

H. Records of transient or operational cycles for those unit components identified in table 5.2-2 and 5.2-2a.

I. Records of reactor tests and experiments.

J. Records of training and qualification for current members of the facility staff.

K. Records of safety-related quality assurance activities required by the QATR and not specifically described in the previous paragraph addressing records retained at least 5 years.

L. Records of reviews performed for changes made to procedures or equipment or reviews of tests or experiments pursuant to 10 CFR 50.59.

M. Records of meetings of the Plant Review Board (PRB) and the Nuclear Safety Review Board (NSRB).

N. Records of secondary water sampling and water quality.

O. Records of analyses required by the radiological environment monitoring program.

P. Records of the service lives of all hydraulic and mechanical snubbers required by the Technical Requirements Manual, including the date at which the service life begins and associated installation and maintenance records. (For Unit 1 this applies to all safety-related snubbers installed or replaced after July 1, 1981.)

Q. Records of reviews performed for changes made to the Offsite Dose Calculation Manual and the Process Control Program.

13.6.3 EVENT RECORDS

Records of occurrences such as radioactive releases and environmental surveys are maintained at the plant site. These records are considered to be of a significant value in demonstrating the safe operation capability of the plant and will therefore be kept for the life of the plant. The following are examples of these type records:

A. Records of plant radiation and contamination surveys.

B. Gaseous and liquid release data.

13.6.4 ENVIRONMENTAL RECORDS

Records of modifications to plant structures, systems, and components determined to potentially affect the continued protection of the environment are retained for the life of the plant. All other records, data, and logs relating to the environmental protection plan are retained for 5 years or, where applicable, in accordance with the requirements of other agencies.

13.7 INDUSTRIAL SECURITY

The industrial security requirements of 10 CFR 73.55 will be met for the Farley Nuclear Plant (FNP). This section discusses in general how FNP will meet these requirements. A description of detailed security measures for the physical protection of the plant was submitted to the Nuclear Regulatory Commission (NRC) in May 1977. As a result of the onsite review conducted by the NRC staff between August 2, 1977, and August 12, 1977, Alabama Power Company (APC) submitted a revised description of security measures on November 11, 1977. Following a meeting with the NRC on March 1, 1978, APC submitted general revisions to the NRC on April 14, 1978. On November 16, 1978, a final submittal was made to the NRC. On February 26, 1979, the NRC issued Amendment 9 to the Unit 1 operating license, incorporating the physical security plan into license NPF-2, effective February 23, 1979. This plan describes the security measures that are effective in meeting 10 CFR 73.55.

Security measures include provisions for:

A. Initial employee investigation and continuing evaluation/review.

B. A security force.

C. A lighted physical barrier.

D. A lock and key system.

E. A system of intrusion alarms.

F. Liaison with local law enforcement authorities and redundant communication links with these authorities.

G. Routine operating and administrative procedures that adequately monitor the condition of vital areas and equipment.

H. Control of the movement of personnel, materials, and vehicles into and within the plant controlled area to ensure an adequate security program.

I. Written procedures.

Several changes have been made to the Security Plan in accordance with 10 CFR 50.54(p).

In accordance with 10 CFR 50.54(p) and 10 CFR 73, Appendix C, APC submitted a Contingency Plan on October 8, 1979. Revisions to this plan were submitted on March 20, 1980. The NRC issued approval of the Contingency Plan on May 1, 1980.

Also in accordance with 10 CFR 73.55(b)(4), APC submitted a Security Personnel Training and Qualifications plan on August 16, 1979. On April 29, 1981, APC submitted Revision 1 to this plan. The NRC issued approval of this plan on August 18, 1981, and incorporated it into both unit operating licenses.

13.7.1 PERSONNEL AND PLANT DESIGN

13.7.1.1 Plant Design

The plant design and arrangement include features that enhance industrial security and reduce the vulnerability of the plant to deliberate acts that may adversely affect the plant and public safety. The plant design incorporates a system of locked fences that form protected areas for control of access to major plant structures and equipment. Vital outlying structures incorporate fences with structural design to assist in controlling access. Gates through fences utilize a lock and key system administered by the security (site) manager. Intrusion alarms and closed circuit television are also integrated, as needed, into the plant design for electrical/electronic surveillance. Portions of the fences, including those surrounding vital structures, are lighted between sunset and sunrise.

Doors allowing access to plant structures have a lock and key system with strict administrative control. Doors to vital structures have intrusion alarms. Vital structures are those enclosing vital equipment and facilities. These facilities and equipment are considered vital if their failure could lead to a radiological accident significantly affecting the health and safety of the public. Also, associated equipment or facilities designed to limit the consequences of such radiological accidents or required for safe shutdown of the reactor are considered vital equipment.

At least two independent communication links with the local law enforcement authorities are provided. One of these links utilizes electromagnetic waves. One link is available through the use of a two-way radio system. Intrusion alarms and communication links terminate in the central and secondary alarm stations.

The grading, ground cover, and landscaping within the protected area do not introduce barriers to surveillance by the security patrol. All-weather roads and pathways are provided within the protected areas for the use of the security patrol.

Intrusion alarms, security fences, lights, and communication links are maintained in operable and effective condition under the supervision of the security (site) manager. Lights and communication links are inspected and tested for operability and required functional performance. Intrusion alarms are tested periodically.

13.7.1.2 Employee Selection and Performance Review

In order to select reliable personnel to protect against industrial sabotage, employment standards and procedures have been established by SNC management. These include application forms, background investigation, physical examination, and interviews. The application, background investigation, physical examination, and initial interviews are coordinated by the SNC Personnel Department. Prior to employment for a position at the plant, the applicant's personnel file is reviewed and at least one detailed interview is conducted by SNC Personnel. All new employees have a 6-month probation period during which their performance is closely observed. Nuclear security officers (NSOs) are screened and qualified in accordance with the provisions of the FNP Training and Qualification Plan.

Personnel being considered for promotion and/or transfer to the plant from other plants or departments within the company are screened to ensure the effectiveness of the plant industrial security program.

An alert plant organization, cognizant of its responsibility for protection against industrial sabotage, is maintained. The performance of all employees is appraised annually and the results reported in order to: further aid in maintaining a high level of employee performance and the maximum utilization of employee abilities; provide recorded evidence of employee performance for use in making judgments concerning transfer, demotion, promotion, and terminations; ensure that employees are adequately and systematically informed of the effectiveness of their service; and further facilitate the maintenance of a high standard of supervision in SNC. A statement of the results of those appraised is signed by the employee's supervisor.

Observation of employee performance is a continuous supervisory function; such observation is made as a regular part of day-to-day supervision. Plant supervision is constantly on the alert for early detection of changes in behavioral patterns of employees under its supervision.

13.7.2 SECURITY PLAN

The following sections discuss in a general manner various aspects of the FNP Security Plan.

13.7.2.1 Means for Control of Plant Access

A security force of well-trained, uniformed NSOs polices plant property and provides access control and surveillance of the plant protected and vital areas. Other plant personnel, such as the operating group, help monitor access inside plant structures by observation of the plant area during equipment checks and by challenging any unauthorized individuals within the plant buildings.

Gates permitting entrance to the protected areas surrounded by a security fence are either locked or manned access control is in effect. The main security fence and fences surrounding outlying structures are regularly patrolled by roving NSOs. The roving NSOs have radio communication with the central alarm station.

Guidelines are included in the security plan for monitoring and controlling access to and from the plant and the movement of persons within the plant. The security plan also includes guidelines for searching vehicles and personnel entering and exiting the plant. In-plant access control is provided by operating personnel challenging the entry of unauthorized persons attempting to enter vital operating areas. Guidelines controlling the entry of unauthorized vehicles and the entry and exit of unauthorized materials through the fence and gate system are included in the security plan. Vehicle access to the protected area is limited to certain authorized vehicles and there are vehicle barriers installed to deny forced entry of a vehicle.

13.7.2.2 Control of Personnel by Categories

The general public is admitted inside the controlled area at the Central Security Control Building. A visitor identification system is used as the primary form of access control inside the security areas. Visitors are escorted while inside protected and vital areas by authorized personnel who are responsible for the visitors' actions, areas of movement, and safety.

The biometrics access control system will control access to the protected areas. Access is limited to properly authorized individuals. Authorized individuals are admitted by identification of the geometric hand reader and a proximity card reader. The readers positively identify each individual by their hand print and the RFID tag in their security badge.

However, override capability is provided to either allow or deny entry to the protected area. Permanent plant employees and other authorized employees are positively identified by the biometrics access control system.

13.7.2.3 Access Control During Emergencies

The Security Plan is compatible with the Emergency Plan and Contingency Plan procedures. NSOs are informed of any emergency situations within the plant and are informed as to what outside assistance and support personnel will arrive. If necessary, additional personnel are assigned to facilitate admitting emergency vehicles and personnel as fast as possible. While on the site, all outside emergency personnel are under the direction of the emergency director.

13.7.2.4 Equipment Monitoring

The plant operations personnel monitor the status of plant systems and equipment by means of annunciators, indicating lights, indicators, and recorders. Operating logs and computer printout data are frequently examined for changes in equipment performance. Most equipment is in continuous operation, and any changes are immediately detected by the operator. Standby and emergency equipment is periodically tested on a routine basis as required by the plant Technical Specifications and the Technical Requirements Manual. System operators inspect accessible equipment and areas for unusual operating characteristics and abnormal conditions on a frequency established by plant procedures. These inspections should detect foreign objects, evidence of a sabotage attempt, etc. System valve positions are periodically checked by the system operators using valve checklists. In addition, shift support supervisors, plant supervisors, and plant engineers make frequent unscheduled inspection tours through the plant. The combination of these efforts provide reasonable assurance that unauthorized physical changes in the status of components of equipment do not go undetected for long periods.

Key operating log sheets and selected recorder tracings are reviewed daily by plant operation and technical staff personnel. Abnormal changes observed are called to the attention of the plant manager and appropriate supervisors for investigation and corrective action, if required. This audit serves to ensure early detection of changes which have a significant bearing on plant performance.

13.7.2.5 Potential Security Threats

Procedures for dealing with potential dangers, such as bomb threats and civil disturbances, including provisions for timely notification of proper authorities, are included in the contingency plan. These procedures are written in sufficient detail so that a qualified individual can perform the required actions without direct supervision.

If there appears to be a real threat of disorder, off-duty NSOs will be recalled and local and State law enforcement authorities will be contacted for assistance.

13.7.2.6 Administrative Procedures

In the event of an incident of suspected sabotage or condition that threatens the security of the plant, security personnel immediately notify the emergency director and implement appropriate contingency plan events. The executive vice president will be notified of the situation as soon as possible by the vice president-Farley or his designated alternate. A report will be prepared by the security (site) manager that will include, as a minimum, the cause of the event, extent of damage, if any, and actions taken to prevent recurrence of a similar event. Copies of the report will be sent to the plant manager, regulatory affairs manager, and vice president-Farley. The NRC will be notified of the situation in accordance with the contingency plan, and a report containing all information indicated above will be submitted.

The nuclear oversight vice president will make or cause to be made audits of the plant security program as specified in the Security Plan. Based on these audits, the vice president-Farley will direct revising and updating the program, if needed. A report on such audits will be forwarded to the vice president-Farley, the regulatory affairs manager, and the plant manager.

The following security records are maintained in the plant records system:

A. NSO logs.

B. Test and maintenance records of security equipment.

C. Up-to-date copy of the Security Plan including all security procedures.

D. Reports of responses to intrusion alarms or threats to plant security.

E. Key and lock records.

F. Security program audits.

G. Up-to-date copy of the Contingency Plan and associated procedures.

H. Up-to-date copy of the security personnel training and qualification plan.

13.8 RISK INFORMED CATEGORIZATION AND TREATMENT

13.8.1 INTRODUCTION

On November 22, 2004, the NRC issued 10 CFR 50.69 that presented nuclear management with an opportunity to further enhance equipment reliability and plant safety by focusing on those critical structures, systems, and components (SSCs) with the highest safety significance. The rule broadly adjusts the scope of safety-related components that are subject to the existing NRC regulations. The implementation of this new rule is strictly voluntary on the part of each licensee.

Current NRC regulations define the plant equipment necessary to meet the deterministic regulatory basis as “safety-related.” This equipment is subject to NRC special treatment regulations. These special treatment requirements go beyond normal commercial and industrial practices and include quality assurance (QA) requirements, qualification requirements, inspection and testing requirements, and Maintenance Rule requirements. Other plant equipment is classified as “nonsafety-related” and is typically not subject to special treatment requirements. For those components that are categorized as Low Safety Significant, 10 CFR 50.69(b)(1) allows compliance with alternative requirements in lieu of the following special treatment requirements.

(i) 10 CFR Part 21.

(ii) The portion of 10 CFR 50.46a(b) that imposes requirements to conform to Appendix B to 10 CFR Part 50.

(iii) 10 CFR 50.49.

(iv) 10 CFR 50.55(e)

(v) The in-service testing requirements in 10 CFR 50.55a(f):

The in-service inspection and repair and replacement (with the exception of fracture toughness), requirements for ASME Class 2 and Class 3 SSCs in 10 CFR 50.55a(g); and the electrical component quality and qualification requirements in Section 4.3 and 4.4 of IEEE 279, and Sections 5.3 and 5.4 of IEEE 603-1991, as incorporated by reference in 10 CFR 50.55a(h).

(vi) 10 CFR 50.65, except for paragraph (a)(4).

(vii) 10 CFR 50.72.

(viii) 10 CFR 50.73.

(ix) Appendix B to 10 CFR Part 50.

(x) The Type B and Type C leakage testing requirements in both Options A and B of Appendix J to 10 CFR Part 50, for penetrations and valves meeting the following criteria:

(A) Containment penetrations that are either 1-in. nominal size or less, or continuously pressurized.

(B) Containment isolation valves that meet one or more of the following criteria:

(1) The valve is required to be open under accident conditions to prevent or mitigate core damage events;

(2) The valve is normally closed and in a physically closed, water-filled system;

(3) The valve is in a physically closed system whose piping pressure rating exceeds the containment design pressure rating and is not connected to the reactor coolant pressure boundary; or

(4) The valve is 1-in. nominal size or less.

(xi) Appendix A to Part 100, Sections VI(a)(1) and VI(a)(2), to the extent that these regulations require qualification testing and specific engineering methods to demonstrate that SSCs are designed to withstand the safe shutdown earthquake and operating basis earthquake.

It should be noted that 10 CFR 50.69 does not replace the existing “safety-related” and “nonsafety-related” classification. Instead, 10 CFR 50.69 divides these classifications into two subcategories based on high or low safety significance, such that there are four categories of risk-informed safety class (RISC), as shown below:

RISC-1: safety-related SSCs that perform (high) safety significant functions.

RISC-2: nonsafety-related SSCs that perform (high) safety significant functions.

RISC-3: safety-related SSCs that perform low safety significant functions.

RISC-4: nonsafety-related SSCs that perform low safety significant functions.

When applying alternative treatment, 10 CFR 50.69 requires that the licensee “shall ensure, with reasonable confidence, that RISC-3 SSCs remain capable of performing their safety-related functions under design basis conditions, including seismic conditions and environmental conditions and effects throughout their service life.”

Southern Nuclear received approval from the NRC to implement 10 CFR 50.69 at Farley 1 & 2 as outlined in Reference 1.

13.8.2 SSC CATEGORIZATION

As outlined in the Safety Evaluation Report (SER), Plant Farley 1 & 2 will use the methodology outlined in NEI 00-04, 10 CFR 50.69 SSC Categorization Guidance, Revision 0, to categorize SSCs. For pressure retaining components, consistent with the NRC SER, Plant Farley 1 & 2 will use the passive component categorization method as approved by the NRC for ANO-2 and as outlined in Reference 2.

The SSC categorization process is outlined in plant procedures and associated instructions.

10 CFR 50.69(f)(2) requires updating the UFSAR to reflect which systems have been categorized. The following table is revised as part of the periodic UFSAR update to reflect systems that have been categorized.

System Name	System Designator

13.8.3 SSC TREATMENT

13.8.3.1 Treatment of Component Categories

The programs or processes that implement the special treatment requirements are revised to recognize that the special treatments no longer apply to RISC-3 components. The programs or process either allow continued application of the special treatments or acceptable alternative treatments, as applicable, to provide reasonable confidence that these components would perform their safety-related function under design basis accidents.

The following information provides the general approach for applying treatment for the component categories:

A. RISC-1 Components

The purpose of treatment applies to RISC-1 SSCs is to maintain compliance with NRC regulations and to ensure that these SSCs can perform their risk-significant functions consistent with the categorization process. These components continue to receive existing treatment required by NRC regulations and associated Farley 1 & 2 implementing procedures.

Some safety-related components may be credited for performing functions that are beyond the design basis or for performing safety-related functions under conditions that are beyond the design basis. The Farley 1 & 2 PRA does not take credit for such functions unless there is a basis for confidence that the component will be able to perform the functions (e.g., demonstrated ability of the component to perform the functions under the specified conditions). A technical basis will be confirmed for RISC-1 components credited for performing functions that are beyond the design basis or for performing safety-related functions under conditions that are beyond the design basis, and if not confirmed a technical basis will be developed for the credit taken, potentially including the creation of a treatment for the SSC that validates the capability credited.

B. RISC-2 Components

The purpose of treatment applied to RISC-2 SSCs is to maintain their ability to perform risk-significant function consistent with the categorization process. These components will continue to receive any existing special treatment required by NRC regulations and Farley 1 & 2 programs. Additionally, the risk-significant functions of these components will receive consideration for enhanced treatment. This consideration is described in paragraph 13.8.3.2.

C. RISC-3 Components

These components may receive alternative treatments, in lieu of previous special treatments, as described in the affected programs.

D. RISC-4 Components

The treatment of these components is not subject to regulatory control.

E. Uncategorized Components

Until a component is categorized, it continues to receive the special treatment required by NRC regulations and associated Farley 1 & 2 implementing programs, as applicable.

13.8.3.2 Enhanced Treatment of RISC-2 SSCs

Nonsafety-related HSS components may perform risk-significant functions that are not addressed by the special treatment requirements in NRC regulations or current Farley 1 & 2 programs.

When a nonsafety-related component is categorized as HSS, Plant Farley determines whether enhanced treatment is warranted to enhance the reliability and availability of the component in support of its HSS function(s). In particular, Plant Farley evaluates the treatment applied to the component to ensure that the exiting controls are sufficient to maintain the reliability and availability of the component in a manner that is consistent with its categorization. This process evaluates the reliability of the component, the adequacy of the existing controls, and the need for any changes. If changes are needed, additional controls are applied to the component. In addition, the component is placed under the Maintenance Rule monitoring program, if not already scoped in the program. Additionally, as provided in the Nuclear Quality Assurance Topical Report (QATR), nonsafety-related HSS components are subject to the enhanced QA program. These controls will be specifically targeted to ensure reliability of the critical attributes that resulted in the component being categorized as HSS. Components under these controls will remain nonsafety-related, but the enhanced treatments will be appropriately applied to give additional confidence that the component will be able to perform its HSS function(s) when demanded.

These identified processes provide reasonable confidence that HSS components will be able to perform their risk-significant functions. The validation of functionality of HSS SSCs (safety-related SSCs for which existing special treatment does not provide the applicable level of confidence and nonsafety-related SSCs) will consist of a documented technical evaluation under the corrective action program to determine what enhanced treatment, if any, is warranted for these SSCs to provide reasonable confidence that the applicable risk-significant functions will be satisfied. The performance of these SSCs will be monitored to provide reasonable confidence for their ongoing capability to perform their risk-significant functions. The design control process will evaluate facility changes affecting the risk-significant functions of these SSC.

REFERENCES

1. G. Edward Miller (NRC) to Cheryl A. Gayheart (SNC), “Joseph M. Farley Nuclear Plant, Units 1 and 2, Issuance of Amendment Nos. 233 and 230, To Adopt 10 CFR 50.69, ‘Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors’ (EPID L-2020-LLA-0134),” dated June 30, 2021 (ML21137A247).

2. Safety Evaluation by the Office of Nuclear Reactor Regulation Request for Alternative AN02-R&R-004, Revision 1, Request to Use Risk-Informed Safety Classification and Treatment for Repair/Replacement Activities in Class 2 and 3 Moderate and High Energy Systems, Third and Fourth 10-Year In-service Inspection Intervals,” Docket No. 50-368, Arkansas Nuclear One Plant Unit 2, dated April 22, 2009 (ML090930246).