CHAPTER 13

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CONDUCT OF OPERATIONS

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13.1 ORGANIZATIONAL STRUCTURE OF APPLICANT - (HISTORICAL through Section 13.1.1.1.2.3)

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13.1.1 Management and Technical Support Organization

This section provides information relative to the corporate organization, its functions and responsibilities, and the number and qualifications of personnel participating in the facility design, design review, design approval, construction management, testing, and operation of River Bend Station.

13.1.1.1 Design and Operating Responsibilities

The following sections summarize the degree to which design, construction, and preoperational activities have been accomplished and describe the specific responsibilities and activities relative to technical support for operations.

13.1.1.1.1 Design and Construction Activities

13.1.1.1.1.1 Principal Site-Related Engineering Work

Meteorology

A preoperational meteorological monitoring program was established at the site on December 16, 1971, to provide those meteorological factors that bear upon plant design, operation, and safety. During the first two annual cycles, the meteorological systems were calibrated by Weather Measure Corporation personnel. In March 1977, the program changed in that Teledyne-Geotech supplied new meteorological instruments. This company checked the instruments every two months. In addition, SWEC site personnel checked the instrumentation 5 days a week. SWEC's meteorological group reviewed data obtained via this monitoring program. The systems were turned over to GSU personnel after calibration by Teledyne-Geotech in April 1983. The monitoring program is discussed in Section 2.3.

Geology

Prior to the initiation of construction, site and regional geological investigations were conducted by geotechnical personnel of SWEC or by consultants retained by SWEC during

the period from 1972 to 1975. During construction, all foundations were inspected and photographed. Section 2.5 provides details of these investigations.

Seismology

Consultants to SWEC were assisted by SWEC personnel in conducting geophysical surveys of the site. In particular, Dr. Clay Durham, an independent consultant, was retained to make the seismicity study and interpret seismic survey data. Section 2.5 includes more detailed information.

Hydrology

SWEC made use of the project design flood defined by the U.S. Army Corps of Engineers to estimate the probable maximum flood (PMF) from offsite areas for the River Bend Station site. Since the plant grade elevation is well above the PMF elevation of the Mississippi River, the controlling event is the potential flooding of the site due to a combination probable maximum precipitation and an operating basis earthquake (OBE). Design integrity of safety-related structures in the event of this occurrence has been assured. Flood protection is discussed further in Section 3.4.1.

Demography

SWEC consulted with the U.S. Bureau of the Census, the University of New Orleans, and Gulf South Research Institute for demographic studies relative to population within 50 miles of the plant as discussed in Section 2.1.3.

Environmental Effects

A preconstruction monitoring program was developed to enable the collection of data necessary to determine possible impact on the environment due to construction activities and to establish a baseline from which to evaluate future environmental monitoring.
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A portion of this program was established to provide for a periodic review of all construction activities and to ensure that those activities conform to the environmental conditions set forth in the construction permit. Preoperational monitoring was provided beginning at least 2 years prior to commercial operation of Unit 1.
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13.1.1.1.1.2 Design of Plant and Ancillary Systems

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An evaluation of progress as of December 26, 1984, indicated the estimated percentage of construction completed at that time was 94.4 percent. Activities were then planned in accordance with a fuel load in April 1985 for Unit 1.

13.1.1.1.1.3 Review and Approval of Plant Design Features

Design control and review of safety-related systems, components, and structures was performed in accordance with the Construction QA Program.

During the construction phase, the implementation of design control was delegated to General Electric Company for the NSSS and to Stone & Webster Engineering Corporation for the BOP. While GSU did not design any safety-related components, the Director - River Bend Projects was responsible for review, analysis, and comment on proposed design changes or modifications. This design review was accomplished through written procedures in accordance with the QA Program. In addition, the Manager - Project Management directed GSU interfaces with GE and SWEC Engineering, as well as arranging the necessary support for the construction process. Design control as applied to fire protection required input from a qualified fire protection engineer.

13.1.1.1.1.4 Site Layout with Respect to Environmental Effects and Security Provisions

The shield, turbine, radwaste, fuel, and auxiliary buildings have portions of their structures below station grade, thus giving a low profile to the station. The grounds in the immediate vicinity of the plant buildings will be attractively landscaped. Undisturbed portions of the site will be allowed to remain in their natural state, with provisions having been made for management of wildlife.
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Security provisions in accordance with applicable NRC regulations were incorporated into the overall site layout as described in Section 13.6.

13.1.1.1.1.5 Development of Safety Analysis Reports

Overall responsibility for preparation and updating of the USAR rested with the GSU nuclear licensing section. Preparation of the individual sections was assigned to the cognizant technical groups within GSU, or to SWEC for balance of plant systems and GE for NSS systems.

13.1.1.1.1.6 Review and Approval of Material and Component Specifications

Safety-related project specifications were reviewed in accordance with the construction phase quality assurance program.

13.1.1.1.1.7 Procurement of Materials and Equipment

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Procurement of safety-related materials, equipment, and services was accomplished in accordance with construction phase QA programs.

Efficient procurement procedures and instructions were established to provide for plant needs in accordance with established GSU Quality Assurance and corporate requirements. Measures were taken through revision of the GSU Corporate Purchasing Policy to ensure that procurement for nuclear requirements occurred under Quality Assurance policies and procedures.

The Manager - Project Management was responsible for nuclear fuel procurement. This activity was delegated to the Supervisor - Nuclear Fuels and his staff, which developed contracts regarding nuclear fuel procurement. The remainder of contract management was the responsibility of the Director - River Bend Projects whose duties included directing the monitoring of contracts required for the construction and operation of River Bend Station.

13.1.1.1.1.8 Management and Review of Construction Activities

Commencing with the start of site preparation in September 1975, the following review activities were performed at the construction site by the GSU construction group.
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The Manager - Project Control was responsible for project cost control, accounting, contract surveillance, and budgeting. The Manager - Project Control reported to the Senior Vice President - River Bend Nuclear Group and had the following individuals and their staffs reporting to him:

Director - Contract Management was responsible for monitoring all onsite construction activities performed by SWEC and other contractors to ensure compliance with contractual obligations as well as monitoring project accounting.

1. Director - Task Projects supported the Manager - Project Control by working on any special projects, including financial and contractual problems, arising during the construction of RBS and any subsequent construction during operations.

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When the construction phase was completed, the function of the Manager - Project Control and the organization reporting to him was replaced by the Project Management organization.
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13.1.1.1.2 Preoperational Activities

13.1.1.1.2.1 Development of Human Engineering Design Objectives and Design Phase Review of Proposed Control Room Layouts

The human engineering design objectives were developed jointly with GSU headquarters personnel, SWEC, and GE.

Features pertinent to making the main control room an environment conducive to shift operations include: the use of consistent color schemes providing visual relief and instrumentation coordination; floor layering yielding noise abatement; and lighting that minimizes strobing effects and operator disorientation (which can be caused with neon lamps).

The main control room control center area was arranged to be efficient in operation. Every effort was made to ensure compatibility of all indicating and alarm systems for ease of operator interface. Instrumentation was arranged to minimize personnel interference with control system dynamics and to provide ease of maintenance and calibration.

Several design features were implemented that improve the man-machine interface.

1. Control panels were placed for greater ease in control and panel-mounted indicators that provide the best readability were obtained.

2. Control display arrangement was designed to allow the operator to distinguish immediately the primary device from some auxiliary.

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3. Color CRTs in a limited graphics mode were used to increase operator comprehension and information access.
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4. Uniformity of panel-mounted consoles provide for better recirculation control system operability.

5. Design includes features for ready location of faulty component control devices.

13.1.1.1.2.2 Development and Implementation of Staff Recruiting and Training Programs

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The training programs that are utilized for this facility are described in Section 13.2. These programs have been implemented in accordance with the schedule indicated in that section. A position on Regulatory Guide 1.8, Personnel Selection and Training, is presented in Section 1.8.

13.1.1.1.2.3 Development of Plans for Initial Testing

The GSU River Bend Station (RBS) Startup and Test Superintendent and his staff were responsible for all aspects of the River Bend Station startup and test program. The scope of testing that was accomplished during the test program was defined by this group. This included defining the boundaries of the systems to be tested so that a clear interface could be established where systems overlapped. Effort was expended towards defining the manpower and material requirements required by the startup and test program (Chapter 14).

A conceptual plan for RBS-1 was prepared and approved by GSU. This plan detailed the GSU startup organization and provided manpower estimates for the testing sequences.

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The startup manual provided a general description of organizational responsibilities and of SWEC and GE interfaces regarding the startup program. Procedures for writing, reviewing, and implementing tests were given. Preoperational and initial test program policies were stated and the responsibilities of the Facility Review Committee (FRC) and Joint Test Group (JTG) were delineated regarding the performance of reviews. Startup procedure preparation was completed. Preoperational, startup and test programs incorporated the operational staff. The experience gained provided an improved working knowledge of the systems, components, and equipment at RBS.

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[End of Historical Section.]
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13.1.1.1.2.4 Development of Plant Maintenance Programs

The maintenance programs are organized to ensure efficient maintenance while maintaining radiation exposure as low as is reasonably achievable. The organization is described in Section 13.1.2. The personnel report to the Manager - Maintenance.

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Maintenance shall be scheduled and planned considering the possible safety consequences of concurrent or sequential maintenance, testing or operating activities. Except in emergencies or abnormal operating conditions where immediate actions are required to protect the health and safety of the public, to protect equipment or personnel, or to prevent the deterioration of plant conditions to possibly unsafe or unstable level, maintenance or modification of equipment shall be preplanned and performed in accordance with written procedures. Where written procedures would be required and are not used, the activities that were accomplished are documented after the fact and receive the same degree of review as if they had been preplanned.
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The maintenance staff is sized to perform the routine and preventive maintenance work load. The station staff is supplemented as necessary by other EOI maintenance crews and outside contractors. Maintenance and repairs of safety-related equipment are performed under the direction of cognizant supervisors and in accordance with accepted procedures and work practices.

The scope and frequency of the preventive maintenance is based on past experience with similar equipment, engineering judgment, and the manufacturer's recommendations. Suitable records are kept to establish, at a minimum, the maintenance history of major safety-related equipment. Maintenance and repairs of safety-related equipment is performed in accordance with written maintenance instructions, operating instructions, station orders, vendor technical manuals, and applicable codes and regulations. Except for emergencies, all maintenance work is preplanned.

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The responsibility for development of Plant Maintenance Programs lies with Plant Staff. Recommendations for creating, modifying, or removing any programs or procedure which affect Plant Maintenance must be reviewed and approved by the General Manager or by either the Manager - Operations or the Manager - Maintenance. Should changes affect design or plant operations, the Engineering group is notified for proper review and approval. During startup, any tests or experiments requiring changes to existing or proposed maintenance programs or procedures are reviewed by the Manager - Maintenance for resolution of potential problems.

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13.1.1.1.3 Technical Support for Operations
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Technical support for plant operations has been established and is in effect for RBS. Refer to the Quality Assurance Program Manual (QAPM) for discussion of the EOI Management structure, Fig. 13.1-2 through 4 for the RBS Administrative structure, and Fig. 13.1-6 for the RBS Plant Operations structure. The Engineering department provides technical support to RBS for the life of the plant (see Fig. 13.1-4). Safety-related design work (and nonsafety-related design work) for RBS is the responsibility of the Director - Engineering. Performance of design work is delegated to the various Managers and their staff with additional input available from outside consultants. This design work, i.e., configuration management including drawing control, is accomplished in accordance with procedures. Departmental procedures reflect applicable regulatory requirements and stipulate proper preparation, review, approval and verification.
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The Licensing section coordinates and effects official communications with the NRC staff, develops documentation concerning the station facility licenses and permits, and provides recommendations on regulatory issues.
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The corporate Fuels & Analysis Group, coordinates, monitors, and directs (1) RBS contracts and activities for procurement, conversion, enrichment, and fabrication of uranium fuels; (2) spent fuel and high level waste disposal contracts and programs; (3) material safeguards programs; (4) work control of planning, design, and manufacture; and (5) economic analysis and accounting, participant, rate, financial, and QA support on nuclear fuels, and (6) probabilistic safety assessment (PSA) and risk-informed program work efforts, as well as deterministic safety analysis.

The Operations Support section, located at Echelon One in Jackson, Mississippi, reports to the Vice President - Operations Support and is responsible for providing support in the areas of Oversight, Security, Materials Purchasing and Controls and Nuclear Support.

13.1.1.2 Organizational Arrangement

Entergy Operations, Inc. (EOI) is a generating subsidiary of Entergy Corporation, a registered public utility holding company. EOI's principal office is located in Jackson, Mississippi. EOI assumes sole responsibility for the operation of River Bend Station (RBS) while Entergy Gulf States Louisiana, LLC, which is also a subsidiary of Entergy Corporation, maintains ownership of RBS. By way of NRC Order issued on October 26, 2007, the Facility Operating License was transferred to a new Louisiana limited liability company, Entergy Gulf States Louisiana, LLC. By way of Amendment No. 189 issued on October 1, 2015, the Facility Operating License was transferred from Entergy Gulf States Louisiana, LLC, to Entergy Louisiana, LLC. Subsequent references to "Gulf States Utilities" and "GSU" contained herein are retained for historical purposes.
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13.1.1.2.1 General

The corporate organization which provides the line responsibility for the operation of the company is discussed in the Quality Assurance Program Manual (QAPM).

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Several groups in EOI Corporate provide support functions for the plant. Additionally, the plant staff is augmented by members of certain EOI Corporate groups assigned to the site. EOI Corporate provides support in the areas of nuclear fuels, legal, finance, industrial safety, human resources, communications, employee concerns, oversight, licensing, operating experience, quality assurance, security, and engineering. Also, members of various groups coordinate with peers from the other EOI plants to develop common programs or to exchange information.

Figure 13.1-2 depicts the RBS onsite management structure. Figures 13.1-4 and 13.1-7 depict organization charts for RBS administration support groups. Figure 13.1-4 depicts an organization chart for the RBS Engineering group. Figure 13.1-5 depicts an organization chart for shift staffing during operations and Figure 13.1-6 depicts an organization chart for the Plant Operations structure.

EOI is committed to providing the necessary fire protection for RBS during operation. Administrative controls and procedures exist which ensure safe, reliable activities at RBS. Additional details regarding fire protection at RBS can be found in USAR Section 9.5.1 and Appendices 9A and 9B.

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13.1.1.2.1.1 Position Titles

The position titles discussed in the following sections are identified in general terms and may not be identical to the current EOI position titles. An example is referring to the RBS General Manager, Plant Operations as the General Manager.

13.1.1.2.2 Site Vice President

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The ultimate responsibility for design, procurement, construction, testing, quality assurance, and operation of RBS rests with the Site Vice President who reports to the Chief Operating Officer. The Site Vice President delegates certain authority to the General Manager and the Regulatory and Performance Improvement Director.

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13.1.1.2.3 General Manager

The General Manager is responsible for the overall safe, reliable, and efficient operation of RBS; maintaining compliance with the requirements of the operating license and technical specifications; and maintaining a properly trained and licensed operating staff. Additional discussion is contained in Section 13.1.2.2.1.
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13.1.1.2.4 Director – Regulatory and Performance Improvement
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The Director – Regulatory and Performance Improvement is responsible for site management of Performance Improvement, Emergency Planning, Security and Training.

The Director – Regulatory and Performance Improvement is responsible for providing timely and accurate information to senior RBS management concerning overall plant nuclear safety and reliability, and providing the same information to RBS line organizations.

13.1.1.2.4.1 Manager – Performance Improvement
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The Manager – Performance Improvement is responsible for the RBS corrective action program, operating experience, performance assessments, industrial safety and human performance. The corrective action program includes trending and trend analysis for identification of adverse trends for management action. The operating experience program provides processes and industry information for utilization at the site. The Manager – Performance Improvement reports to the Director – Regulatory and Performance Improvement (See Fig. 13.1-7).

13.1.1.2.4.2 Manager – Regulatory Assurance

The Manager – Regulatory Assurance is responsible for licensing activities to ensure RBS is operated and maintained in accordance with NRC rules and regulations and other agency rules. Responsibilities include maintaining appropriate RBS interface with the NRC regional offices in Arlington, Texas, and appropriate state and local officials. Licensing is responsible for maintaining the Operating License and Technical Specifications, and for the interface with the NRC Headquarters offices in Rockville, Maryland. The Manager – Regulatory Assurance reports to the Director – Regulatory Compliance (See Fig. 13.1-7).
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13.1.1.2.4.3 Manager – Emergency Planning

The Manager - Emergency Planning is responsible for developing and maintaining an Emergency Response Plan for RBS that meets regulatory requirements for supporting the operating license and for ensuring the Plan remains current. He is responsible for the interface with local and state emergency response programs, the development of scenarios for site exercises and the training of site emergency preparedness personnel. The Manager - Emergency Planning reports to the Director – Regulatory and Performance Improvement (See Fig. 13.1-7).

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13.1.1.2.5 Manager – Training

The Manager - Training reports to the Director – Regulatory and Performance Improvement. The Manager - Training is responsible for the development, administration, and implementation of the training program for both licensed and non-licensed positions and the general employee training program for the remainder of the RBS staff. Areas of responsibility include a plant-referenced simulator used in RO/SRO training courses. See Section 13.2 for a further description of the RBS training program.

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13.1.1.2.6 Manager - Finance

The Manager - Finance is responsible for business services at RBS.

13.1.1.2.6.1 Supervisor – Document Control/Records Management

The Supervisor – Document Control/Records Management is responsible for the document control and records management for RBS and reports directly to EOI Corporate with a supporting function to the Manager – Regulatory Assurance.

13.1.1.2.7 Director - Engineering

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The Director - Engineering reports to the Vice President-Site Engineering. The Director – Engineering is responsible for the overall engineering activities of RBS. The Director - Engineering manages the activities of engineering groups which include Design and Program Engineering and Systems and Engineering. Principal duties include:

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1. The engineering effort of RBS and others in the design and analysis of equipment and systems, and in the control of changes.

2. Task force leadership for special, complex technical projects with limited duration but great significance to the plant.

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3. Transient analysis of the system, support of the plant in operation, and support of licensing and technical specifications.

4. Implementation of the design control system, primarily through control and tracking of design changes; design document coordination; and maintenance of procedures.

5. Review and analysis of proposed design changes of the plant to ensure that the design meets EOI corporate requirements, requirements of regulatory criteria, and industry concerns. Includes investigation and suggestion of alternative designs if there is a concern with the existing or proposed design.

6. Performance Monitoring of plant systems and components.

7. Nuclear performance of the reactor core.

13.1.1.2.7.1 Manager - Design and Program Engineering

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The Manager - Design and Program Engineering is responsible for the Mechanical, Civil/Piping, Electrical, Instrument and Control and Procurement Engineering sections. The Manager - Design and Program Engineering is also responsible for providing drafting, procedure maintenance, control of vendor technical information, and minor modifications. The Manager - Design and Program Engineering assures that the plant structures, systems and components are within the established design basis and licensing commitments, and that proposed modifications and enhancements to the design basis are acceptable and licensable before being implemented. Responsibility includes planning, directing, coordinating, and participating in analytical changes to the established design criteria to assure the design is controlled, reviewed and approved appropriately, and documented. In addition, responsibility includes the design control program for assigned structures, systems and components and Equipment Qualification. Responsibility includes the accurate documentation of design bases and design output in the form of drawings and engineering procedures.

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13.1.1.2.7.4 Manager – Systems and Components Engineering
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The Manager – Systems and Components Engineering is responsible for performance monitoring of plant systems and components, and implementation of the maintenance rule.

13.1.1.2.8 Nuclear Station Security
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The Manager - Security at RBS is responsible for the conduct and content of the security programs and procedures. The Manager – Security is also responsible for a contracted security guard force which implements and maintains the RBS Physical Security Plan. The Manager – Security reports to the Director, Regulatory and Performance Improvement.
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13.1.1.2.9 Manager – Information Technology

The Manager – Information Technology at RBS is responsible for performance monitoring of plant computer systems and information technology (IT) infrastructure, services and support. The Manager – IT reports directly to the corporate Director – IT.
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13.1.1.3 Qualifications of Headquarters Staff

13.1.1.3.1 General

Members of the support staff (personnel in the Nuclear Fuels Group at the corporate office at Echelon One in Jackson, Mississippi) available for the technical support of RBS activities possess the education, experience, and skills that provide reasonable assurance that decisions and actions during the design, procurement, construction, testing, quality assurance, and operation of RBS do not constitute a hazard to the health and safety of the public.
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The Safety Review Committee (SRC), responsible for independent reviews, has a majority of members who are not directly responsible for plant operations. More details on the SRC can be found in Section 13.4.3.
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The educational background and experience of the members of the support staff meet or exceed the criteria presented in ANSI/ANS-3.1-1978. The qualifications for nuclear plant personnel are described in Section 13.1.3.

13.1.1.3.2 Resumes

The resumes of key personnel providing technical assistance for the operation of RBS are available upon request.
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13.1.2 Operations Organization

The operation of RBS is under the responsibility and authority of the General Manager.

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RBS instructions and procedures used by the Operations staff are reviewed in accordance with the site procedures and the QAPM.

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13.1.2.1 Plant Organization

The plant organization for RBS is shown on Figures 13.1-5 and 13.1-6. The number of personnel normally available to support plant operations and those plant positions requiring NRC licenses are indicated in these figures. When additional personnel are required to augment the normal crews during outages, RBS plans to have plant personnel work overtime and use consultants and contractor personnel to handle the additional work load.

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13.1.2.1.1 Operations

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The Operations section is responsible for fuel loading, startup, operation, liquid radwaste processing other than as managed by the Chemists, and shutdown of all station equipment. They also provide the nucleus of the emergency and fire-fighting teams. The operations section is under the responsibility and authority of two Assistant Operations Managers who report to the Manager - Operations. The Assistant Operations Managers are responsible for the day-to-day operation of the plant and for issuing special orders to shift operations personnel. Either the Operations Manager or at least one of the Assistant Operations Managers is an SRO.

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The normal shift crew is shown on Figure 13.1-5. As shown, at least two Radiation Protection Technicians, one Nuclear Chemistry Technician, and one Maintenance Technician are on duty at all times. A site fire brigade of at least five members shall be maintained on site at all times.* The fire brigade shall not include the Shift Manager, Supervisor - Control Room, the Shift Technical Advisor, nor the two other members of the minimum shift crew necessary for safe shutdown of the unit and any personnel required for other essential functions during a fire emergency.

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* Fire brigade composition may be less than the minimum requirements for a period of time not to exceed 2 hours, in order to accommodate unexpected absence, provided immediate action is taken to fill the required position.

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As an option, the Operations Department may utilize the Shift Technical Advisor (STA) on shift as either a separate shift individual or in the combined role of SRO/STA. If a separate STA-only position is on shift, he will report to the Shift Manager and is assigned to evaluate plant conditions and provide advice to the Shift Manager during plant transient and accident conditions. Additional discussion regarding STAs and SRO/STAs is provided in Sections 13.1.2.3, 13.1.2.3.5, and 13.2.
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Plant management and technical support is present or on call at all times. This shift composition provides adequate manpower to cover operating contingencies which can reasonably be expected to occur, and if necessary, implement the Emergency Plan.
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13.1.2.1.2 Maintenance

The Maintenance section is under the responsibility and authority of the Manager - Maintenance. The Maintenance section is responsible for plant maintenance activities, as well as support services in the plant. The Superintendents report directly to the Manager - Maintenance in the performance of assigned responsibilities. Each superintendent is responsible for those specific maintenance duties applicable to his or her group. This includes control of general maintenance or modification subcontracted activities. Duties include but are not limited to coordination, development, and administration of the section and its personnel; and the development, review, implementation and control of appropriate procedures and records. Superintendents are directly responsible for work performed by assigned personnel to maintain and/or repair equipment to ensure adherence to RBS Operating Manual, applicable Technical Specifications and the QAPM. They are also responsible for installation of new systems and components.

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13.1.2.1.3 Radiation Protection

The Radiation Protection section is responsible for establishing and implementing the RBS radiation protection program. This includes ensuring that radiation exposure is kept as low as reasonably achievable (ALARA) and within the guidelines of 10CFR20. This section also ensures that all plant staff, contractors, and visitors to RBS have received proper radiation training and are monitored for radiation in accordance with the Radiation Protection Plan and NRC regulations. This section certifies that all radioactive material meets DOT, NRC, and receiver requirements prior to being removed from RBS.

The Radiation Protection section is under the responsibility and authority of the Manager - Radiation Protection, who reports to the General Manager. The Manager - Radiation Protection is responsible for the management of the RBS Radiation Protection program and the direction of all radiation protection department personnel. The Manager supervises the radiation and personnel monitoring programs, the ALARA program, the respiratory protection program, and the whole body counting program. He ensures that adequate radiation protection training has been given to all plant staff and emergency team members and that they have completed training and medical qualifications prior to working in radiation areas.

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13.1.2.1.4 Chemistry

The Chemistry section is responsible for plant chemistry, and environmental and effluent activities, including sampling and analysis of radioactive and nonradioactive plant fluid systems; trend analysis of results; and recommendations for corrective action. The chemistry section is under the responsibility and authority of the Manager - Chemistry. The Manager – Chemistry reports to the General Manager.

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13.1.2.1.5 Planning and Scheduling Outage

The Outage Planning/Scheduling section is responsible for planning, scheduling, tracking and reporting plant outage activities. Outage planning and scheduling is under the responsibility and authority of the Manager, Production.
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13.1.2.2 Plant Personnel Responsibilities and Authorities

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The functions, responsibilities, and authorities of key supervisory and technical positions in the RBS organization are briefly described in the following sections. Detailed administrative procedures for these positions have been prepared in accordance with ANSI/ANS 3.1-1978, "Selection and Training of Nuclear Power Plant Personnel."

13.1.2.2.1 General Manager

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The General Manager has overall responsibility for the safe, reliable, and efficient operation of the plant and training of the staff. He is responsible for maintaining compliance with the requirements of the operating license and technical specifications. It is his responsibility to maintain a staff of properly trained and licensed personnel to accomplish all the various plant functions. He reports directly to the Site Vice President.

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The General Manager issues plant administrative procedures, which clearly define the responsibilities and authorities of key plant personnel.

During the absence of the General Manager, his responsibilities are assumed by a Manager or other qualified individual as described in the Station Administrative Procedures (see also Section 13.1.2.2.5).

13.1.2.2.2 Managers and Superintendents

The Managers report directly to the General Manager, with the Superintendents reporting directly to the Manager responsible for the functional area. These positions exercise managerial responsibility for the safe and efficient operation and maintenance of RBS. Either the General Manager or the Manager - Operations will have been trained to a level commensurate with a Senior Reactor Operator or have been previously certified or licensed as an SRO on a BWR power plant.

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The following positions report to the Manager - Operations:

1. Assistant Operations Manager - Shift
2. Assistant Operations Manager - Support
3. Reactor Engineering Supervisor

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In the absence of the Manager - Operations, the responsibilities are assumed by an Assistant Operations Manager or another designated individual.
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Maintenance Department Superintendents report to the Manager – Maintenance. They are responsible as assigned to supervise the functions/activities of the following:

1. Electrical Maintenance

2. Mechanical Maintenance

3. Instrumentation and Control Maintenance
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4. Composite Teams

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In the absence of the Manager - Maintenance, the responsibilities are assumed by a designated individual.

Four supervisors/superintendents report to the Manager - Radiation Protection.

In the absence of the Manager - Radiation Protection, the responsibilities are assumed by a supervisor/superintendent or by another individual, as designated by the Manager – Radiation Protection.

13.1.2.2.3 Manager - Chemistry

Two supervisors report to the Manager – Chemistry. In the absence of the Manager – Chemistry, the responsibilities are assumed by one of the Supervisors or by another designated individual.
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13.1.2.2.4 Manager - Nuclear Oversight

The Manager - Nuclear Oversight is assigned responsibility for assuring implementation of the EOI QA program onsite and any additions or changes thereto at the station. He reports directly to the Director - Oversight (corporate office), and maintains a working interface and communication with the General Manager and other members of the Plant Staff.

13.1.2.2.5 Contingency Responsibilities

During normal plant operations, the General Manager is responsible for overall plant operation. In the event of unexpected contingencies of a temporary nature, or whenever the General Manager is unavailable, the following persons will be responsible in the order listed for all plant operational activities.

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1. Manager - Operations

2. Assistant Operations Manager (Shift or Support)

3. Shift Manager

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In the event of incidents that require the implementation of the RBS Emergency Plan, responsibilities will be as indicated therein.

13.1.2.3 Operating Shift Crews

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The minimum shift crew composition is described in TS/ TRM Section 5.0 Administrative Control, Subsection 5.2.2 Unit Staff. Deviations in the number of Operations personnel assigned to shift are controlled by administrative procedures. There are one qualified Radiation Protection Technician assigned to each shift to implement the radiation protection program, one Nuclear Chemistry Technician to perform necessary sampling and analysis, and a Maintenance Technician to troubleshoot instrumentation problems.
8←• 13←• 16←•

•→13 •→8
During normal operation, the number of operating shift crews will usually be from four to six. If a strike should occur the number of shift crews may be three.

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13.1.2.3.1 Shift Manager
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The Shift Manager, an SRO, is responsible to the Assistant Operations Manager - Shift for all activities relating to station operation and safety during his assigned shift. This responsibility includes compliance with applicable license and regulatory requirements, and the safety of plant personnel and equipment. In the event of an accident or emergency, the Shift Manager is responsible for determining the severity of the situation and directing the actions of the shift personnel until he is relieved. The Shift Manager has the responsibility to shut down the plant if, in his judgment, conditions warrant this action. There is one Shift Manager assigned to each shift, representing the senior management individual on shift, and is onsite when fuel is being moved or loaded.
8←• 10←• 13←• 14←•

13.1.2.3.2 Control Room Supervisor

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The Control Room Supervisor, an SRO, monitors the reactor controls, directs all core alterations, and directs the activities of the Reactor Operators and Auxiliary Operators. He reports to the Shift Manager and has the authority and responsibility to shut down the plant if, in his judgment, conditions warrant this action. There is at least one Control Room Supervisor assigned to each shift and in the main control room at all times unless relieved by an active SRO licensed individual.

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13.1.2.3.3 Reactor Operators

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The Reactor Operators, under the direction of the Control Room Supervisor or the Shift Manager monitor and manipulate the reactor controls as well as other controls and plant auxiliary equipment. There are normally three Reactor Operators assigned to each shift, at least one of which is stationed in the main control room at all times. However, when a separate STA is assigned on shift, an additional Auxiliary Operator may be substituted for a Reactor Operator. A Reactor Operator may be the Fire Brigade Leader on his/her assigned shift. Section 9B.4.8 describes fire brigade size and membership.

13.1.2.3.4 Auxiliary Operators

The Auxiliary Operators, under the direction of the Control Room Supervisor or Shift Manager, operate the plant auxiliary equipment and the radwaste system. There are normally five Auxiliary Operators assigned to each shift, one of which is assigned to Radwaste. They are non-licensed personnel. An Auxiliary Operator may be the Fire Brigade Leader on his/her assigned shift. Section 9B.4.8 describes fire brigade size and membership.

13.1.2.3.5 Shift Technical Advisor

The Shift Technical Advisor (STA) is an individual assigned to evaluate plant conditions and provide advice to the Shift Manager during plant transient and accident conditions. This individual is utilized on shift if the Shift Manager or Control Room Supervisor is not qualified to assume the dual-role SRO/STA position.

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13.1.3 Qualifications of Nuclear Plant Personnel

13.1.3.1 Qualification Requirements

RBS personnel meet the requirements of ANSI/ANS 3.1-1978, Selection and Training of Nuclear Power Plant Personnel.

13.1.3.2 Qualifications of Plant Personnel

Resumes are available upon request.
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13.2 TRAINING

13.2.1 River Bend Station Staff Training Program

The objectives of this program are to:

1. Establish and maintain an organization fully qualified to be responsible for the operation, maintenance and technical aspects of the River Bend Station

2. Train sufficient personnel to operate and maintain the plant in a safe and reliable manner throughout its life

3. Prepare operational, technical, professional and other personnel requiring licenses for Nuclear Regulatory Commission (NRC) Examinations

4. Provide the necessary training, on a continuing basis, to insure adequate numbers of qualified individuals exist to offset the impact(s) of promotions and/or attrition

5. Provide requalification training to maintain a high level of proficiency throughout the plant staff.

•→14 •→8A •→8 •→3
River Bend Station is a member of the National Academy for Nuclear Training. Membership is obtained after receiving accreditation for twelve specified training programs. To obtain and maintain accreditation for a program, River Bend Station must demonstrate to the National Nuclear Accrediting Board that a program meets accreditation objectives. These objectives provide for a performance based training program which is known as the systematic approach to training.

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The plant staff training matrix is presented in Fig. 13.2-1. This matrix is established to meet long-term training needs. It is the intent of RBS to provide training to each individual(s) as outlined herein unless:

7←•
1. The individual(s) are already qualified on the basis of experience, academic or related technical training

2. The individual(s) have received sufficient documented on-the-job training to negate the need for specific formal classroom instruction.

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•→1
Any deviation between the training an individual actually receives and that identified in Fig. 13.2-1 will be documented in accordance with approved programs and this documentation retained in the training records system. Having not received all the identified training does not in itself disqualify an individual from performing duties associated with his or her job, so long as he or she is allowed to perform only those function(s) for which documented qualifications exist.

•→14 •→13 •→10 •→7
The overall training program for the plant staff is the responsibility of the Site Vice President. The details of the training program(s) and the administration thereof are the responsibility of the Manager - Training or his designee.

The Manager - Training delegates the responsibility for implementation of specific programs to individual discipline supervisors. The supervisors are responsible for the quality and adequacy of the program content, material development, presentation, examinations, performance evaluation, and documentation of each respective program.

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Those individuals applying for a license or license renewal will have certification complete pursuant to 10CFR Sections 55.31 (a)(4) and 55.57 (a)(4) and (a)(5) signed by the Site Vice President and provided to the NRC on NRC Form 398. Form 398 will be completed in accordance with the guidance in NUREG 1021.

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13.2.1.1 Program Description

Professional, supervisory, and technical personnel receive training necessary to satisfy requirements for their positions. This training will consist of formal classroom presentations coupled with on-the-job training. Vendor training will be utilized, as necessary, to provide additional knowledge on specific tasks.

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The overall training program for River Bend Station (RBS) is designed to provide plant staff training. The individual training programs comply with Regulatory Guide 1.8 and ANSI/ANS 3.1-1978. They are designed to utilize past training and/or experience coupled with the necessary site specific training to insure each position within the plant staff is manned by a competent, well qualified individual.

SRO candidates who serve in the dual role SRO/Shift Technical Advisor (STA) capacity have as a minimum the education and training required by the Commission Policy Statement on Engineering Expertise on Shift, October 28, 1985 (FR 43621).

Individuals assigned as STA, who are not SRO licensed, will be given the training described in Section 13.2.10.5, which meets the intent of NUREG-0737, TMI Action Plan Item I.A.1.1.

•→7
RBS also complies with Reg. Guide 1.8 in that RBS will require that license candidates complete 3 months of on-shift experience as an extra person. This will be accomplished during the control room training program as the candidate assumes a trainee status with no concurrent duties.
7←•
In the following subsections, the training program elements are described to include a general course description and the approximate course length. Each course is presented by instructors qualified in accordance with applicable procedures.

13.2.2 General Employee Training (A1)

•→14
The objective of the RBS General Employee Training Program is to indoctrinate all personnel requiring unescorted access to the plant in the general procedures utilized to assure nuclear plant safety and personnel safety. Only those personnel who have completed the applicable General Employee Training Course are allowed unescorted protected area or radiation control area access. General Employee Training courses cover eight areas, as specified in ANSI/ANS 3.1-1978, 10CFR19, and Regulatory Guides 8.13 and 8.27.
1←• 14←•

•→14 •→1
1. Quality assurance training

2. Radiation protection training

3. Station emergency procedures

4. Industrial health and safety

5. Access control and security

6. Plant description, operating policy, organization and administration

7. Fire protection

8. Fitness-for duty and Supervisory Observation.

Training in specific job-related procedures and instructions will be accomplished by the responsible supervisor.

New employees and contractor personnel participate in the initial General Employee Training. Temporary consultants, maintenance, service personnel, vendor personnel, etc, receive the General Employee Training to the extent necessary to safely execute their duties. Personnel with equivalent training from other facilities may be given only the site-specific portion of the program.

13.2.2.1 General Employee Retraining

In order to maintain the knowledge acquired during the initial training, periodic retraining is provided. Retraining is accomplished by self study seminars, safety meetings, computer based training and formal classroom lectures so that retraining is provided in the areas covered by the initial training but will also include any modifications, plant changes, or other updates needed for the program.

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The GET retraining program will be conducted at a frequency to meet the needs of the plant personnel such that each employee is provided retraining on a periodic basis. This retraining includes retraining for radiation workers.
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13.2.2.2 Respiratory Protection Training (A2)
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Training in airborne hazards and the use of respirators is provided to indoctrinate personnel in the proper methods of protecting themselves from inhaling toxic or radioactive materials. This training is provided for familiarization only and does not replace the mask fit and tests conducted by Radiation Protection or training.

13.2.3 Emergency Response Training (A3)

Personnel assigned duties associated with the Emergency Plan will complete specialized training commensurate with their job responsibilities. Emergency Response training is administered as described in the Emergency Plan Section 13.3.7.1.
•→7 7←• 14←•
13.2.4 Supervisory Skills Training (A4)

This course of study consists of training in the following areas for supervisory positions:

1. Leadership

2. Interpersonal Communication

3. Command Responsibilities

4. Motivation of Personnel

5. Problem Analysis

6. Decisional Analysis.

•→14
13.2.5 Fire Protection Training

Fire protection training consists of training in three specific areas:

1. Employees designated to be members of the station fire brigade.

2. Employees assigned to the fire protection staff.

3. Offsite fire departments.

Specific training requirements for each of the above categories of personnel are as described in the following sections.
1←• 14←•

•→14 •→1
13.2.5.1 Fire Brigade Training (B1)
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Personnel assigned as fire brigade members receive formal training prior to assuming brigade duties. The course subject matter is selected to satisfy the requirements of Regulatory Guide 1.120 (see Section 1.8 for clarification), Branch Technical Position CMEB 9.5-1 and the NRC document "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls, and Quality Assurance." In addition, course material selection also includes guidance from NFPA Codes 801, 802, and 803. The training includes both classroom instruction and field exercises.

Course material includes the following classroom instruction:

1. Chemistry of fire

2. Classification of fires and principles of extinguishment

3. Fire prevention and inspection techniques

4. Fire protection systems

5. Radiological safety aspects of fires at nuclear facilities

6. Indoctrination of plant firefighting plans with specific identification of individual responsibilities

7. Identification of the type and location of fire hazards and associated types of fires that could occur in the plant

8. The toxic and corrosive characteristics of expected products of combustion

9. Identification of the location of firefighting equipment for each fire area and familiarization with the layout of the plant, including access and egress routes

10. The proper use of available firefighting equipment and the correct method of fighting each type of fire including: fires in energized electrical equipment, fires in cables and cable trays, hydrogen fires, fires involving flammable and combustible liquids or hazardous process chemicals, fires resulting from construction or modifications (welding), and record file fires

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11. The proper use of communication, lighting, ventilation, and emergency breathing equipment

12. The proper method for fighting fires inside buildings and confined spaces

13. The direction and coordination of firefighting activities (fire brigade leaders only)

14. Detailed review of firefighting strategies and procedures

15. Review of the latest plant modifications and corresponding changes in firefighting plans.

Items 14 and 15 may be deleted from the training of nonoperations personnel who may be assigned to the fire brigade.

Field exercises are conducted to reinforce the classroom training and provide an opportunity to practice the skills learned. These exercises include:

1. Fighting small fires with portable fire extinguishers

2. Interior firefighting using breathing apparatus

3. Controlling incidents involving flammable gases or pressurized liquid fuels

4. Fighting large flammable liquid fires using hose lines and/or foam

5. Fighting flammable liquid fires inside building.

The classroom instruction and field exercises are provided by qualified individuals who are knowledgeable, experienced, and suitably trained in fighting the types of fires that could occur and in using the types of equipment available at RBS.

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13.2.5.2 Fire Protection Staff Training (B2)

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The station fire protection staff receives training in:

1. Design and maintenance of fire detection, suppression, and extinguishing systems

2. Fire prevention techniques and procedures

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•→1
3. Firefighting techniques and procedures for plant personnel and the fire brigades

•→14
4. Hazardous material identification and handling.

Specific courses to achieve the above training objectives will be provided for the System Engineers assigned to the fire protection staff if they are not fully trained when hired. These courses are available from the fire and emergency training facility operated by Louisiana State University and will be attended as necessary by these individuals. Other training organizations may be used to provide this training on a case-by-case basis.

13.2.5.3 Offsite Fire Department Training (B3)

14←•
Training for offsite fire departments that have agreed to assist RBS during a major fire onsite is provided to make members aware of the need for radiological protection of personnel, the special hazards associated with River Bend Station, and the operational precautions to be followed when fighting fires at RBS.

The course is provided annually and includes instruction in the following:

1. Basic radiation protection, including the use of personal dosimetry devices

2. Plant familiarization, including hazards and fire protection systems

3. Firefighting procedure, including entry to and exit from the plant.

•→14
13.2.5.4 Fire Brigade Retraining

1. Classroom

Regular planned meetings are held at least once each calendar quarter for brigade members to review changes in the fire protection program and other subjects as necessary. Periodic refresher training sessions are held to repeat the classroom instruction program for brigade members over any 2-year period. These sessions may be concurrent with the regular planned meetings.

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2. Practice

Practice sessions are held for each shift fire brigade on the proper method of fighting the various types of fires that could occur in a nuclear power plant. These sessions provide brigade members with experience in actual fire extinguishment and the use of emergency breathing apparatus under strenuous conditions encountered in firefighting. These practice sessions are provided at least once per year for each fire brigade member.

3. Drills

Fire brigade drills are performed in the plant so that the fire brigade can practice as a team. Unannounced drills shall be full dress. Regularly scheduled drills will be full dress. Full dress includes helmet, coat, boots, gloves, and emergency breathing apparatus.

Donning of face mask and use of emergency air is not mandatory during drills.

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Drills are performed at least once each calendar quarter for each shift fire brigade. The offsite local fire department is invited to participate in at least one drill per year.

Each fire brigade member should participate in each drill, but must participate in at least two drills per year.

13.2.5.5 Fire Brigade Records

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Individual records of training provided to each fire brigade member, including drill critiques, will be maintained as part of the permanent plant files for at least 3 years to ensure that each member receives training in all parts of the training program. Retraining or broadened training for fire-fighting within buildings will be scheduled for all those brigade members whose performance records show deficiencies. A system to document drills including critiques and corrective actions has been developed. Fire brigade training review and individual performance programs also have been developed.

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13.2.6 River Bend Systems BWR Technology Training (C1)

This course is designed to provide the student with an understanding of the design, construction and operating characteristics of RBS. The course length, scope, and depth may vary according to the experience level of the student. The applicable training program procedures describe the specific course outlines for the various disciplines. This course will be taught by qualified instructors.

13.2.7 Maintenance Training Programs (D1)

13.2.7.1 Maintenance Training Programs

The River Bend electrical, instrumentation and controls, and mechanical maintenance training programs are designed to enhance safe and reliable operation of the plant by ensuring each participant has the necessary job-related skills and knowledge needed to perform their job duties. The program is accredited by the National Academy for Nuclear Training and is based upon a systematic approach to training. It provides for initial and continuing training as well as a task/job qualification process.

13.2.7.2 Maintenance Supervisor Training Program

The River Bend maintenance supervisor training program is designed to provide maintenance supervisors with supervisory, managerial, administrative and technical knowledge to supplement their experience, training and education. The program is accredited by the National Academy for Nuclear Training. It provides for initial and continuing training as well as job familiarization sessions with selected plant personnel to provide supervisors with the perspective about organizational functions, philosophies, practices and responsibilities.

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13.2.8 Quality Assurance Training Program

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The training program for quality assurance personnel is based upon regulatory commitments delineated in the Quality Assurance Program Manual, (Regulatory Guide 1.146 Revision 0, dated August 1980; and Regulatory Guide 1.58 Revision 1, dated September 1980). The exact content and scope of the training may change as a result of training and performance feedback. Subject areas may include and provide support for audits, inspections, and non-destructive examination.

13.2.9 Technical Training Programs

•→1

13.2.9.1 BWR Chemistry Training (D2)

This training program is designed to prepare the members of the plant chemistry staff to establish and maintain the chemistry program.

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13.2.9.2 Radiation Protection Staff Training (D3)

This program is designed to prepare the members of the radiation protection staff to safely and efficiently carry out their position responsibilities. Radiation protection staff members will be trained in areas commensurate with their assigned responsibilities.

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13.2.9.3 Engineering Support Personnel Training Programs (D4)

The training Program for engineering support personnel is developed from INPO guidelines and job performance task analysis, and are updated from post-training performance feedback. The exact content and scope for each will change as a result of the feedback.

13.2.10 Operations Training Programs

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The Operations Training Programs consist of the following individual programs:

1. Auxiliary Operator Training

2. Reactor Operator Training

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•→1
3. Senior Reactor Operator Training

4. Requalification Training for Licensed Operators
•→14 •→13
5. Shift Technical Advisor Training

6. Operations Shift Manager Training

All of the operations training programs have been accredited by the National Academy for Nuclear Training. Each program's content and scope is based on a systematic approach to training.
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13.2.10.1 Auxiliary Operator Training (E1)

The Auxiliary Operator Training Program consists of classroom and on-the-job training. The basic training is supplemented by watchstation-specific training. This training ensures that Auxiliary Operators possess the ability to safely and efficiently execute the duties associated with a given watchstation.

13.2.10.2 Reactor Operator (RO) Training (E2)

The RO is a licensed individual responsible for control manipulation at River Bend. The RO training program is designed to ensure that individuals who operate the controls of a nuclear reactor are competent to do so.

13.2.10.3 Senior Reactor Operator (SRO) Training (E3)

The SRO is a senior licensed individual who typically directs the activities of licensed reactor operators. The SRO training program is designed to insure that individuals who direct the activities of licensed operators possess an understanding of the principles, systems, components, and practices associated with the operation of River Bend, as well as advanced analytical and diagnostic skills.

13.2.10.4 Requalification Training for Licensed Operators (E4)

The requalification training program has been established to provide continuing training for licensed operators. The goal of continuing training is to maintain and enhance the performance and professionalism of licensed personnel to achieve the high operations standards to ensure safety and reliability at River Bend.
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13.2.10.5 Shift Technical Advisor (STA) Training (E5)

The STA is an individual assigned to evaluate plant conditions and provide engineering and accident assessment advice to the operating crew during abnormal and accident conditions. The STA training program is designed to insure individuals assigned to the STA position possess the necessary engineering and technical expertise to provide advice to the operating crew at River Bend during abnormal and accident conditions.

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13.2.10.6 Operations Shift Manager (OSM) Training

The OSM training program delineates initial training, continuing training, and professional development for the Operations Shift Manager (OSM), beyond that received during training for Reactor Operator (RO) and Senior Reactor Operator (SRO) at River Bend Station (RBS).

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13.2.11 River Bend Simulator

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The simulator at the River Bend Training Center is a full-scope plant-referenced simulator that meets Regulatory Guide 1.149, including Section C.2 as it relates to plant malfunctions (see Section 1.8). The River Bend simulator is used to provide an understanding of the integrated response of the plant during normal and off-normal conditions, the bases for this response, and the appropriate operator actions to maintain the plant in a safe condition with emphasis toward procedure usage and understanding.

Each instructor who will conduct programs for licensed operators on the River Bend simulator shall be, as a minimum, SRO certified on the River Bend simulator. This certification process consists of intensive training similar in scope to that required for Senior Reactor Operators and includes a written and operating test similar in scope and content to the NRC certification examination. In addition, instructors will be qualified in accordance with applicable procedures for instructional proficiency.

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13.2.12 Training Program Documentation

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Records are maintained to document each person's participation in this program. These records will be maintained in the Permanent Plant File for a minimum of 2 years or as otherwise specified in this chapter or in approved procedures. These records include:

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1. Attendance records

2. Copies of all operator requalification examinations given with acceptable answers

3. Copies of the answers to these examinations

4. Results of performance evaluations of licensed operators

5. Records of any additional training given to correct exhibited deficiencies of licensed operators

6. On-the-job training records

7. Copies of licenses of all operators

8. Records for personnel other than operators as addressed in ANS 3.1-1978.

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13.2.13 Applicable Documents

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The River Bend Station training program follows the regulations and considers the guidance listed below:

1. 10CFR Part 50, Domestic Licensing of Production and Utilization Facilities

2. 10CFR Part 55, Operators' Licenses

3. 10CFR Part 19, Notices, Instructions, and Reports to Workers; Inspections

4. Regulatory Guide 1.8, Personnel Selection and Training

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13.3 EMERGENCY PLANNING

(This section is provided in a separate binding.)

13.4 REVIEW AND AUDIT

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RBS has developed a comprehensive program for reviews and audits of operating phase activities that are safety-related. This program has been developed from the guidance provided by NRC Regulatory Guide 1.33, Revision 2, which endorses ANSI N18.7-1976.
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A program for reviews, including in-plant and independent reviews, is established to accomplish the following:

1. Verify that activities affecting safety-related structures, systems, and components during the operational phase are performed in conformance with applicable codes and standards, company policy and rules, approved operating procedures, license provisions, and QA requirements.

2. Review proposed plant changes to design, tests, and procedures that affect nuclear safety.

3. Verify that all Reportable Events are promptly investigated and corrected in a manner which reduces the probability of such events recurring.

4. Detect trends which may not be apparent to a day-to-day observer.

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To perform these reviews, EOI has established oversight committees and assessment groups. Reviews at the plant level are performed by the On-Site Safety Review Committee (OSRC) (see 13.4.1). Independent reviews are performed by the Safety Review Committee (SRC) (see 13.4.3), of which a majority of members are independent of direct responsibility for plant operations. In addition, assessments are performed by on-site groups or Corporate Assessment. The audit function is described in 13.4.5 below.
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13.4.1 Onsite Review

The On-Site Safety Review Committee (OSRC) is responsible for in-plant reviews. This group is composed of site management personnel that independently review activities to provide additional assurance that the plant is operated and maintained in accordance with the Operating License and applicable regulations that affect nuclear safety. The OSRC reports to and advises the General Manager Plant Operations on matters related to nuclear safety.

The OSRC is responsible for all functions administratively assigned to the Facility Review Committee (FRC). Refer to the Quality Assurance Program Manual (QAPM) for specific requirements for conducting reviews and audits of operating phase activities important to safety.
7←• 13←• 14←•

•→14 14←•
13.4.2 Technical Review and Control
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Responsibility for technical review and approval of various procedures and programs is described below and in the RBS Technical Specifications/Technical Requirements Manual.
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13.4.2.1 Procedures and Programs

Written procedures are established to cover, but are not necessarily limited to, the following activities:

1. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978

2. The applicable procedures required to implement the requirements of NUREG-0737

3. Refueling operations

4. Surveillance and test activities of safety-related equipment

5. Security Plan implementation

6. Emergency Plan implementation

7. Fire Protection Program implementation

8. Process Control Program implementation

9. Offsite Dose Calculation Manual

10. Quality Assurance Program for effluent and environmental monitoring

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11. Technical Requirements Manual

12. TS Bases Control Program Implementation
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13.4.2.2 Preparation and Review

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Each procedure and program required by Technical Specifications 5.4 and 5.5, as well as other procedures which affect nuclear safety, and changes thereto, is prepared by a qualified individual/group. Each such procedure, and changes thereto, is reviewed by an individual/group other than the individual/group which prepared the procedures, or changes thereto, but who may be from the same organization as the individual/group which prepared the procedure. Individuals responsible for these reviews are members of the River Bend Station supervisory staff, in accordance with administrative procedures. Each such review includes a determination of whether or not additional, cross-disciplinary review is necessary and a verification that the proposed actions do not constitute an unreviewed safety question.
7←•
If deemed necessary, such review is performed by the appropriately designated review personnel.

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All proposed changes to the Emergency Plan are reviewed by the On-Site Review Committee, with the exception of editorial changes.

13.4.2.3 Approval

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Each procedure and program required by Technical Specifications 5.4 and 5.5, as well as other procedures which affect nuclear safety, or changes thereto, is approved prior to implementation by the General Manager, one of the Managers, the Manager - Radiation Protection, or by the Director/ Department Head responsible for the program or the activity described in the procedure.
4←• 7←• 8A←• 14←• 15←•
13.4.2.4 Documentation

The preparation, review, and approval of the procedures and programs required by Technical Specifications 5.4 and 5.5, as well as other procedures which affect nuclear safety, are documented; records are maintained for at least five years in the permanent plant files.

13.4.3 Independent Review

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The Safety Review Committee (SRC) is responsible for providing independent review of activities affecting nuclear safety. The SRC also reviews, monitors and enhances the health of the safety conscious work environment at River Bend. Refer to the Quality Assurance Program Manual (QAPM) for specific requirements for conducting reviews and audits of operating phase activities important to safety.
5←• 7←• 8←• 10←• 13←• 15←•

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15←• •→13 •→10 •→8 •→7
13.4.4 Independent Safety Engineering Function

The Independent Safety Engineering Function is no longer a specific designated function for plant operating oversight and reduction of human errors. Rather, the oversight function is perfomed as part of on-going processes for assessing plant operation at RBS. Those functions include activities conducted by Nuclear Independent Oversight, Performance Improvement, Regulatory Assurance, and Engineering. Human Performance improvement has been integrated into all site functions and is a goal for all departments. The combination of these various activities meet the intent for independent safety review for the commitment to NUREG-0737, Section I.B.1.2. as follows:

1. An Operating Experience group evaluates and distributes in-house and industry information to appropriate EOI personnel for review. Recommendations resulting from these reviews are implemented to improve safety and reliability.

2. Engineering support for RBS is located on site, making the engineers readily available to address potential design basis issues.

3. System Engineering support for RBS is located on site, responsible for optimizing system performance and reliability and for providing technical assistance to the Operations and Maintenance organizations.

4. The Corrective Action Program contains the essential process elements of problem reporting, root-cause analysis, and corrective action.

5. The use of assessments provides information on performance trends and improvements for EOI and RBS Management.

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6. Oversight committees (OSRC and SRC) review plant operations.
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7. Management participation in the Corrective Action Program process (e.g., review of condition reports, grading the significance of condition reports, review of root cause analysis, and determination of which conditions relate to human performance) ensures that the quality and integrity of the program is maintained and that problems are visible to RBS Management.

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13.4.5 Audit Program

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The audit program is described in the Quality Assurance Program Manual.
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13.5 PLANT PROCEDURES

13.5.1 Station Operating Manual

13.5.1.1 Administrative Procedures

•→2

Management of the River Bend Station in a safe, productive, and efficient manner is assured through the use of station administrative procedures. The responsibilities, assignments, methods used, and procedural actions are defined in these procedures which are the top level documents within the Station Operating Manual. All safety-related operations are conducted using detailed written, approved procedures.

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Station administrative procedures address procedure development and the organizations of administration, operations, maintenance, technical support, radiation protection and chemistry. These station administrative procedures may have individual instruction in areas of significant safety or management administrative control. In addition, specific plant sections write section administrative procedures in which the supervisor specifies section policies, practices and assigns responsibilities to section personnel.

Station and section administrative procedures, as a minimum, cover such subjects as standing orders to shift operating personnel, senior reactor operator and reactor operator authority and responsibilities, responsibilities to meet 10CFR50.54 (i), (j), (k), (l), and (m) requirements, special orders of a transient nature, equipment control, maintenance and modification control, scheduling surveillance testing, temporary procedures, fire protection procedures, and a diagram of the control area indicating the area designated "at the controls."

13.5.1.1.1 Conformance with Regulatory Guide 1.33

River Bend Station is operated according to documents such as the Technical Specifications and Station Operating

Manual. Specific conformance with Regulatory Guide 1.33 is addressed in Section 1.8.

13.5.1.1.2 Preparation of Procedures

•→13 •→7 •→2

Procedures for the Station Operating Manual are prepared by the plant staff and others under the direction of the General Manager. These procedures include the activities, systems, and subjects listed in Appendix A to Regulatory Guide 1.33 which are applicable to the River Bend Station configuration. Administrative and technical aspects are addressed in these procedures.

2←• •→16 •→14 •→8 •→6 •→1

Procedures are reviewed and approved by qualified individuals in sections for which they apply. Approved procedures may be changed in accordance with site procedures. Revisions to procedures are reviewed for applicability to 10CFR50.59 by qualified individual(s). Revisions to station administrative procedures are approved by either the General Manager or the manager of the section responsible for the procedure.

1←• 6←• 7←• 8←• 13←• 14←• 16←•

13.5.1.1.3 Procedures

A procedures index list includes the procedure type, procedure number, procedure revision, and latest effective date for each procedure. Procedure types include:

•→2

1. Station administrative procedures (ADM)
2. Abnormal operating procedures (AOP)
3. Administrative Section Procedures (ASP)
4. System operating procedures (SOP)
5. General operating procedures (GOP)
6. Surveillance test procedures (STP)
7. General maintenance procedures (GMP)
8. Alarm response procedures (ARP)
9. Emergency operating procedures (EOP)
10. Chemistry section procedures (CSP)
11. Radiological health procedures (RHP)
12. Fuel handling procedures (FHP)
13. Reactor engineering procedures (REP)
14. Computer System Section Procedures (CCS)

2←•

•→2
15. Corrective maintenance procedures (CMP)
•→12
16. Severe Accident Procedures (SAP)
12←•
16. Plant engineering procedures (PEP)
17. Fire protection procedures (FPP)
18. Chemistry operating procedures (COP)
19. Radwaste section procedures (RWS)
•→13
21. Maintenance lifting procedures (MLP)
22. Maintenance calibration procedures (MCP)
23. Maintenance section procedures (MSP)
24. Operations section procedures (OSP)
24. Preventive maintenance procedures (PMP)
Radiation protection procedures (RPP)
Radiation Protection section procedures (RSP)
Technical Staff section procedures (TSP)
29. Temporary Procedures (TP)
2←•

13.5.1.1.3.1 Station Administrative Procedures

Station administrative procedures have been developed to provide administrative controls of a general nature and include, but are not limited to, the following:
13←•

•→2
2. Procedure Review and Approval
2←•
3. Equipment Control Procedures

4. Control of Maintenance and Modifications

5. Fire Protection Program

6. Crane Operation Procedures

7. Temporary Changes to Procedures

8. Temporary Procedures

9. Special Orders of a Transient Self-Canceling Nature

Additional administrative procedures, of a specific nature, have been developed to define and provide control of plant staff operational activities. These procedures include, but are not limited to, the following:

1. Standing orders to shift personnel

2. Assignment of shift personnel to duty stations

3. Shift relief and turnover

4. Control room access

5. Limitations on working hours

6. Feedback of operator experience

7. Shift supervisor administrative duties

8. Verification of correct performance of operating activities

•→13
13.5.1.1.3.2 Administrative Procedures - Initial Test Program

RBS had committed to providing administrative controls on procedures relating to the Initial Test Program in the RBS Startup Manual and references such in appropriate sections of the USAR.

Control was provided in, but not limited to, the following three areas of the initial test program:
13←•

1. Test Program Procedures - Preoperational Test Procedures (14.2.3.1) and Initial Startup Test Procedures (14.2.3.2) delineated Development, Review, and Approval Procedures. The Facility Review Committee (14.2.2.7 and 13.4.1), Joint Test Group (14.2.2.6), and GSU Startup and Test Department (14.2.2.1) responsibilities and functions are discussed as they had pertained to the review and approval of Initial Test Procedures. Additional groups/individuals which participated in procedural review processes are described in Sections 14.2.2.3, 14.2.2.4, and 14.2.2.5 while Section 14.2.2.8 stipulates the minimum qualifications for any personnel who were responsible for developing, performing, and generating test procedures.

2. Conduct of Test Program - Conduct of Preoperational Phase Testing (14.2.4.1) and Initial Startup Phase Testing (14.2.4.2) addressed testing prerequisites and procedural adherence; while Section 14.2.4.3, GSU Maintenance Work Request, discusses performance of modification and/or repair which resulted from test program analysis and subsequent retesting.

3. Review, Evaluation, and Approval of Test Results - Section 14.2.5, Review, Evaluation, and Approval of Test Results, provides discussion of organizations that were involved in these processes (when acceptance criteria is met or not met), appropriate technical review by qualified groups, and assured prerequisites were met before advancing to the next scheduled test or phase of testing. Section 14.2.6, Test Records, provided proper documentation and permanent plant filing for each individual test and phase of the test program.

13.5.1.2 Operating Procedures

13.5.1.2.1 Control Room Operating Procedures

13.5.1.2.1.1 System Operating Procedures

•→13

1. System Operating Procedures (SOP’s) provide detailed operating

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•→13 •→10
instructions for specific plant systems and include but are not limited to, the following:
10←•

1. Nuclear boiler instrumentation

2. Control rod drive hydraulic system

3. Reactor recirculation system

4. Bearing cooling water system

5. Circulating water, cooling towers, and vacuum priming system

6. Condensate system

7. Condensate storage, makeup and transfer system

8. Reactor feedwater system

9. Moisture separator reheater (MSR), feedwater heaters, extraction steam, and heater drains system

•→10
10. Main steam system (includes automatic depressurization)
10←•

11. Main turbine lube oil system

12. Electrohydraulic Control (EHC) oil system

•→8 •→2
13. Gland seal and exhaust system
•←2 •←8

14. Reactor plant component cooling water system

15. Turbine plant component cooling water system

16. Normal service water system

17. Generator seal oil system

18. Generator stator cooling system

19. Service and breathing air system

20. Instrument air systems

21. Generator hydrogen and carbon dioxide system (generator)

22. Nitrogen blanketing system

13←•

•→13
23. Condenser air removal system
•→10
24. Auxiliary steam
10←•
25. Remote shutdown system

26. Standby liquid control system

27. High pressure core spray system

28. Residual heat removal system

29. Low pressure core spray system

30. Drywell and containment leak detection systems

31. MSIV sealing system (positive leakage control) and penetration valve leakage control

32. Reactor core isolation cooling system

33. Fire detection supervisory system

34. Fire protection water system

35. Fire protection carbon dioxide system

36. Fire protection halon
•→2
37. Hydrogen Water Chemistry H_2 and O_2 System

38. Penetration Valve Leakage System

Standby Service Water System

Standby Gas Treatment System

41. 13.8-kV ac system
•→10
42. 4.16-kV ac system
10←•
43. 480-V ac system

44. 120-V ac system

45. 125-V dc system

46. 48-V dc systems
2←• 13←•

•→13 •→2
47. Cathodic protection system

48. High-pressure core spray (HPCS) diesel generator

49. Standby diesel generator and auxiliaries
•→10
50. Station blackout diesel generator
10←•
51. Main and station transformers
•→10
52. Technical support center and services building HVAC
10←•
53. Auxiliary control building ventilation system

54. Control building HVAC system

55. Containment HVAC system

56. Drywell cooling system

57. Diesel generator building ventilation system

58. Fuel building ventilation system

59. Radwaste building ventilation

60. Turbine building ventilation system

61. Auxiliary building HVAC system
•→10
62. Control building HVAC chilled water system
10←•
63. Isolated phase bus cooling system

64. Water treatment building HVAC system
•→8
65. Auxiliary boiler room HVAC system

66. Yard structures HVAC system
•→10
67. Rod control and information system
10←•
68. Reactor neutron monitoring system
2←• 8←• 13←•

•→13 •→8 •→2
69. Reactor protection system

70. Turbine generator operation

71. Process radiation monitoring system

72. Containment atmospheric monitoring system

73. Digital radiation monitor system

74. Reactor water cleanup system

75. Fuel pool cleanup and cooling systems

76. Off gas system

77. Condensate demineralizer system
2←• 8←•
78. Chemical feed system

79. Cooling tower makeup water clarifier and vacuum priming

80. Domestic water
•→10
81. Makeup demineralizer water treatment system
10←•
82. Makeup water system

83. Waste oil disposal system
2←• 13←•

•→13 •→7 •→2 7←•

84. Solid radwaste collection

•→10 10←•

85. Floor and equipment drains system

•→10 •→7 10←•

86. Waste water treatment

87. Liquid radwaste collection and processing

2←• 7←• •→10

88. Tamaris temperature scanner

89. Solid radwaste processing

90. Liquid radwaste processing/recovery sample tank system

91. Condenser tube cleaning system

92. Service water cooling

93. Turbine and Radwaste building HVAC chilled water system

94. Berm drain system

10←•

95. Suppression Pool Cleanup and Alternate Decay Heat Removal

13.5.1.2.1.2 Abnormal Operating Procedures

Abnormal Operating Procedures (AOP) are provided to correct abnormal conditions which in themselves do not constitute an actual emergency condition, but which could degenerate into a true emergency in the absence of positive corrective action. These conditions include, but are not limited to, those events listed in Appendix A of Regulatory Guide 1.33.

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•→13 13←•
Abnormal Operating Procedures include, but are not limited to, the following:

11. Reactor scram

12. Main turbine and generator trips

13. Automatic isolations

14. Loss of offsite power

15. Loss of main condenser vacuum

•→2
18. Condensate/Feedwater failures

19. Loss of feedwater heating

20. Loss of instrument air

21. Loss of normal service water

22. Loss of one reactor protection system (RPS) bus

2←•
23. Loss of reactor plant component cooling water

24. Loss of turbine plant component cooling water

•→13
25. Thermal hydraulics stability controls

26. Loss of 125 V dc

27. Loss of decay heat removal

28. Loss of standby service water

29. Fire outside the main control room in areas containing safety-related equipment

30. Initiation of standby service water

22. Security Events

23. Loss of Control room annunciators

13←•

•→13
23. ECCS suction strainer blockage

1. Loss of Control Building ventilation

1. Mispositioned control rods
•→2
24. Fuel handling mishaps

2. Severe weather operation

25. Shutdown from outside the main control room

3. Safety relief valve stuck open

4. Hydrogen deflagrations/leaks in the offgas system
2←•
29. Instrument bus power failure

Station blackout
13←•

13.5.1.2.1.3 General Operating Procedures

General Operating Procedures (GOPs) are written to instruct operators in the conduct of major plant evolutions. In general, GOPs direct system alterations and lineups in accordance with the system SOP by direct reference.

•→13
General Operating Procedures include, but are not limited to:

2. Plant startup

3. Power decrease/plant shutdown

4. Scram recovery

•→2
4. Single loop operation

2←•
5. Power maneuvering

13←•

•→12
13.5.1.2.1.4 Emergency Operating Procedures and Severe Accident Procedures

The Emergency Operating Procedures (EOPs) and Severe Accident Procedures (SAPs) function together as an integrated set of instructions. The EOPs protect the principal barriers to radioactivity release through control of key plant parameters. The EOP contingencies form extensions to the top-level guidelines, providing more detailed instructions for controlling individual parameters under degraded conditions. The SAPs extend the EOPs still further, addressing severe accident conditions. A severe accident condition is generally defined as one that produces core damage. If primary containment flooding is required, the EOPs are exited and the SAPs are entered. The SAPs then remain in effect until the emergency is terminated.

•→13 •→4 4←• 13←•
Licensed plant operators are required to know the entry conditions in the Emergency Operating Procedures and Severe Accident Procedures.

Emergency Operating Procedures include, but are not limited to, the following:

•→8 •→4 •→2

5. EOP-0001 - RPV Control

6. EOP-0002 - Primary Containment Control

7. EOP-0003 - Secondary Containment and Radioactive Release Control

8. EOP-0004 - Contingencies

9. EOP-0005 – Emergency Operating And Severe Accident Procedure Enclosures

2←• 4←• 8←• 12←•

•→12 •→8
Severe Accident Procedures include, but are not limited to, the following:

7. SAP-0001 – RPV and Primary Containment Control

8. SAP-0002 – Containment and Radioactivity Release Control

The EOPs and SAPs were developed using the technical guidelines from the BWROG Emergency Procedure and Severe Accident Guidelines (EPG/SAGs), Revision 1. The guidelines were developed by the BWR Owner's Group in response to NUREG-0737, Item I.C.1, "Guidance for the Evaluation and Development of Procedures for Transients and Accidents," and NEI 91-04, "Severe Accident Issue Closure Guidelines."
8←•
Note that the BWROG EPG/SAGs, Rev. 1, incorporated the Hydrogen Control Owners' Group (HCOG) Combustible Gas Control Emergency Procedure Guideline (EPG), Rev. 3.
12←•

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13.5.1.2.1.5 Alarm Response Procedures

Each Alarm Response Procedure (ARP) is composed of a group of individual alarm enclosures. These groups are normally by systems and are located near the panel that contains the alarms annunciator to provide timely reference by the operator.

Each Alarm Response Procedure contains at least the following information:

8. Alarm number

9. Alarm window/title

10. Alarm panel, sections, and grid numbers

11. Alarm set points

12. Alarm initiating devices

13. Automatic equipment actions that occur when the alarm is received

14. Immediate operator actions

15. Possible causes for the alarm condition

16. Subsequent operator actions.

13.5.1.2.1.6 Temporary Procedures

Temporary procedures are procedures that may be used to direct operations during testing or maintenance that are not covered in any other plant procedure. Temporary procedures are of a self-cancelling nature, and are subject to the appropriate approval cycle described in administrative procedures (Section 13.5.1.1.2).

13.5.1.3 Maintenance Procedures

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All maintenance procedures are under the direction of the Manager - Maintenance and are approved by either the Manager - Maintenance or the superintendents reporting to the Manager - Maintenance.

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13.5.1.3.1 General Maintenance Procedures

General Maintenance Procedures (GMPs) are utilized by maintenance personnel when performing maintenance on safety-related equipment.

13.5.1.3.2 Maintenance Section Procedures

Maintenance Section Procedures (MSPs) describe the overall responsibilities for maintenance section supervisors when performing specified maintenance tasks.

•→13
13.5.1.3.3 Preventive Maintenance Procedures

Preventive Maintenance Procedures (PMPs) govern the performance of preventive maintenance on equipment to keep the equipment in a safe, reliable condition.

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13.5.1.3.4 Corrective Maintenance Procedures

Corrective Maintenance Procedures (CMPs) describe the step-by-step operations for correcting maintenance problems associated with equipment.

13.5.1.3.5 Maintenance Calibration Procedures

Maintenance Calibration Procedures (MCPs) describe the performance of necessary calibration required to maintain equipment reliability at set frequencies.

13.5.1.3.6 Maintenance Lifting Procedures

Maintenance Lifting Procedures (MLPs) describe the functions for heavy load lifting and rigging required to protect the safety of personnel and safety-related equipment.

13.5.1.4 Other Procedures

•→13
Other procedures (see Section 13.5.1.1.3) are reviewed and approved in accordance with approved station administrative procedures (ADMs) and describe special functions associated with or the duties of various plant staff sections.

13.5.2 Station Support Manual

13.5.2.1 Purpose and Preparation of Station Support Manual Procedures

•→7
Station Support Manual procedures address activities for which primary responsibility for performance rests with departments that are internal to River Bend Station but are outside the General Manager organization (see Section 13.5.2.2). Where groups other than the department responsible for the activity described in a procedure either must interface with or support that activity, they will be afforded the opportunity for review of both initial

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•→13 •→1
and subsequent issues. Final approval of Station Support Manual procedures will be as specified in Site Procedures.
1←•
•→8 •→2
Procedures for the Station Support Manual are prepared under the direction of applicable department heads by the department responsible for the activities described. Administrative and technical aspects are defined in the procedures. Procedures are classified as safety-related, nonsafety-related or QA Program Applicable and are reviewed by qualified individuals in the departments requiring input to the procedures.
2←• 8←•
•→1
Station Support Manual procedures are originated, revised, reviewed, approved, and controlled in accordance with site procedures. Reviews of revisions to previously approved procedures will be performed by those individuals or departments performing the initial review, where possible. In all cases, reviews after first revisions will be performed by personnel with similar qualifications to those performing the initial reviews.

Procedures in the station support manual will be periodically reviewed as follows to ensure their ongoing accuracy:

1. Emergency Implementing Procedures (EIPs) - Once per 12 calendar months at a minimum.

2. Plant Security Procedures (PSPs) - Once per 12 calendar months at a minimum.

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•→12 •→6
All other Station Support Manual procedures will be revised as-needed based on use and experience in accordance with the QAPM and site procedures.
6←• 12←• 13←•
A revision to a procedure constitutes a review for the purpose of meeting the periodic review requirement.

13.5.2.2 Procedures

Procedures pertaining to responsibilities performed by the following groups are included in the Station Support Manual:

•→13
1. Engineering

2. Administrative services

3. Site Security
•→7
4. Training
7←•
5. Emergency Planning

6. Environmental / Effluents
•→2
9. Nuclear Fuels and Project Management
2←• •→7
17. Licensing
7←•
9. Management Systems

10. Engineering Analysis

11. Independent Safety Engineering group

12. Projects

13. Procurement
•→1
14. Planning and Scheduling

15. Materials
1←• •→3
16. Fitness-For-Duty (Note: An EOI Corporate Procedure now covers the Fitness-for-Duty Program)
3←• •→4
17. Inservice Inspection
4←• •→7

7←• 13←•

•→13 •→1

1←•

13.5.2.2.3 Content of Procedures

13.5.2.2.3.1 Administrative Support Procedures

•→8

Administrative Support Procedures are prepared under the direction of the assigned Manager. These procedures provide detailed instruction for document control, records management, and administrative systems.

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13.5.2.2.3.2 Emergency Implementing Procedures

•→14 •→7

Emergency Implementing Procedures are prepared under the direction of the Manager-Emergency Planning. They provide the instruction needed by RBS personnel to implement the RBS Emergency Plan.

14←•

13.5.2.2.3.3 Engineering Procedures

•→10

Engineering Procedures are prepared under the direction of the Director – Engineering. They provide detailed instructions for managing and controlling station design and providing engineering support services to RBS.

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13.5.2.2.3.4 Plant Security Procedures

Plant Security Procedures are described in Section 13.6.

13.5.2.2.3.5 Training Procedures

•→14

Training Procedures are prepared under the direction of the Manager-Training. They provide information and instruction pertaining to conduct of the training program, including methods used, administration of the program, and documentation of the training given.

14←•

13.5.2.2.3.6 Environmental Services Procedures

Environmental Services Procedures are prepared under the direction of the Manager - Chemistry. Environmental Services Procedures provide instructions for monitoring and documenting the effect of RBS on Environmental Report commitments.

7←• 13←•

•→2
13.5.2.2.3.7 Fuel Management Procedures and Project Management Procedures

•→13 •→10 •→7
Fuel Management Procedures are prepared under the direction of the Reactor Engineering Supervisor and the Operations Manager. Topics addressed include, but are not limited to, nuclear fuel management, including cost and material accountability; special nuclear material control and reporting, including fuel contract and material reporting; central accountability office; and core components accountability.

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13.5.2.2.3.8 Licensing Procedures

Licensing Procedures are prepared under the direction of the Sr. Manager – Fleet Regulatory Assurance. Topics addressed include, but are not limited to, regulatory reports, processing NRC correspondence, control of licensing documents, including the operating license and the USAR, and identifying and tracking regulatory commitments.

13.5.2.2.3.9 Management Systems Procedures

•→1
Management Systems Procedures are prepared under the direction of the Manager - Finance. Topics addressed include, but are not limited to, document and records control, financial accounting, and strategic planning.

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13.5.2.2.3.10 Engineering Analysis Procedures

•→16 •→2
Engineering Analysis Procedures are prepared under the direction of the Manager – Design and Program Engineering. Topics include, but are not limited to, the organization of the Engineering Analysis Section.

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13.5.2.2.3.11 Independent Safety Engineering Procedures

•→10
Independent Safety Engineering Procedures are prepared under the direction of the Director - Regulatory and Performance Improvement. Topics addressed include, but are not limited to, organization, responsibilities, and qualification requirements.

10←• 13←•

•→7
13.5.2.2.3.12 RB Projects Procedures (Historical)
•→10 7←•
RB Projects Procedures are prepared under the direction of the Manager-Project Management. Topics addressed include, but are not limited to, requests for services, preparation of specifications for contracted work, and contract administration.

13.5.2.2.3.13 Nuclear Procurement Procedures
•→7 •→1
Nuclear Procurement Procedures are prepared under the direction of the Manager-Material Purchasing and Contracts. Topics addressed include, but are not limited to, purchasing guidelines, requests for quotations, and purchase orders.
7←•
13.5.2.2.3.14 Material Handling Procedures
•→7
Material Handling Procedures are prepared under the direction of the Manager-Material Purchasing and Contracts. Topics addressed include, but are not limited to, storage and control of materials, shipments, and material issue.
10←• •→3
13.5.2.2.3.15 Fitness-For-Duty Procedures
•→13 •→7
The Fitness-For-Duty Procedure is now prepared under the direction of EOI Corporate. The general objective of the procedure has been to provide reasonable assurance that EOI personnel are reliable, trustworthy, and not under the influence of any substance, legal or illegal, or mentally or physically impaired from any cause, which in any way adversely affects their ability to safely and competently perform their duties. These procedures are governed by the requirements covered in 10CFR2 and 10CFR26.
1←• 3←• •→4
13.5.2.2.3.16 Inservice Inspection Procedures
•→8A
Inservice inspection procedures are prepared under the direction of the Manager – Design and Program Engineering. The objective of these procedures is providing guidelines at RBS for inservice inspection activities which are addressed in 10CFR50.55a, ASME B&PV Code, Section XI - Division 1, and documents issued by the governing authority having jurisdiction at RBS. Topics that are addressed in these procedures include, but are not limited to, planning of inservice inspections, scheduling non-destructive examinations, acceptance criteria for identified conditions, and documenting inspections associated with ASME B&PV Code, Section XI - Division 1.
4←• 7←• 8A←• 13←•

•→13 •→7 •→4 •→1

13.5.3 River Bend Nuclear Procedures

13.5.3.1 Purpose of Procedures

River Bend Nuclear Procedures primarily define the major responsibilities of and interfaces between the departments at River Bend Station. The purpose of these procedures is to assign responsibilities to department(s) and generally outline the steps in meeting the assigned responsibilities and to implement programs, plans, and convey management directives. They are not working level procedures except in cases where the task(s) involved is generic to several departments. Implementation of River Bend Nuclear Procedures requirements are normally through procedures contained in either the Station Operating Manual or the Station Support Manual and other lower tier procedure manuals.

13.5.3.2 Preparation, Approval and Control

•→14 •→12 •→8 •→2

River Bend Nuclear Procedures are prepared under the direction of the departments responsible for performance of activities described. They are approved by the Site Vice President or the directors/managers who report directly to the Site Vice President. Procedures are controlled by the Administrative Support Section in accordance with approved procedures. River Bend Nuclear Procedures will be reviewed per the Quality Assurance Program Manual to ensure their ongoing accuracy.

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13.5.4 EOI Headquarters Procedures

EOI Headquarters administrative and section procedures provide guidance to the site to ensure consistent management direction on programs and processes. They also convey information to the site for specific requirements based on multi-site development of standardized programs and processes. The site maintains alignment with these procedures through direct implementation or implementation through site administrative and section procedures. All procedures issued from corporate headquarters that are implemented directly at the site and provide instructions in the areas of significant safety or management administrative controls are prepared and reviewed as delineated in section 13.5.1.1.2 (Preparation of Procedures).

14←•

•→14
13.6 SECURITY
14←•

(This section is provided in a separate binding.)

•→3

APPENDIX 13A

•→6

The resumes of key personnel providing technical assistance for the operation of RBS are available.

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6←•