

## 6.0 ADMINISTRATIVE CONTROLS

### 6.1 RESPONSIBILITY

6.1.1 The Station Manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.

6.1.2 The Shift Supervisor (or during his absence from the control room, a designated individual) shall be responsible for the control room command function. A management directive to this effect, signed by the Vice-President, Nuclear Production shall be reissued to all Nuclear Production Department station personnel on an annual basis.

McGuire Nuclear Site

### 6.2 ORGANIZATION

#### OFFSITE

INSERT (A)

6.2.1 ~~The offsite organization for unit management and technical support shall be as described in the FSAR, Chapter 13.~~

#### UNIT STAFF

6.2.2 The unit organization shall be as shown in the FSAR, Chapter 13, and:

- a. Each on-duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.2-1;
- b. At least one licensed Operator for each unit shall be in the control room when fuel is in either reactor. In addition, while either unit is in MODE 1, 2, 3, or 4, at least one licensed Senior Operator shall be in the control room;
- c. ~~A Health Physics Technician~~ <sup>(Radiation Protection)</sup> shall be on site when fuel is in either reactor;
- d. All CORE ALTERATIONS shall be observed and directly supervised by either a licensed Senior Operator or licensed Senior Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation; and

e.

~~The Health Physics Technician 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 positions.~~

A INSERT for 6.2.1

6.2.1 OFFSITE AND ONSITE ORGANIZATIONS

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safety of the nuclear power plant.

- a. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationship, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the FSAR.
- b. The Station Manager shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.
- c. The Vice President of McGuire Nuclear Site shall have responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety.
- d. The Senior Vice President Nuclear Generation Department will be the Senior Nuclear Executive and have corporate responsibility for overall nuclear safety.
- e. The individuals who train the operating staff and those who carry out radiation protection and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

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non-licensed operators

station

- f. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions; e.g., licensed Senior Operators, licensed Operators, health physicists, ~~auxiliary operators~~, and key maintenance personnel. radiation protection technicians

Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work a normal 12 hour day with alternating 48 hour and 36 hour work week while the unit is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance or major plant modifications, on a temporary basis, the following guidelines shall be followed:

- 1) An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time;
- 2) An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 28 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all excluding shift turnover time;
- 3) A break of at least 8 hours should be allowed between work periods, including shift turnover time; and
- 4) Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.

Any deviation from the above guidelines shall be authorized by the Station Manager or his deputy, or higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation. Controls shall be included in the procedures such that individual overtime shall be reviewed monthly by the Station Manager or his designee to assure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized.

TABLE 6.2-1

MINIMUM SHIFT CREW COMPOSITION

POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION		
	BOTH UNITS IN MODE 1, 2, 3, or 4	BOTH UNITS IN MODE 5 or 6 OR DEFUELED	ONE UNIT IN MODE 1, 2, 3 or 4 AND ONE UNIT IN MODE 5 or 6 or DEFUELED
SS	1	1	1
SRO	1	none <sup>b</sup>	1
RO	3 <sup>a</sup>	2 <sup>a</sup>	3 <sup>a</sup>
AO	3 <sup>a</sup>	3 <sup>a</sup>	3 <sup>a</sup>
STA	1	none	1

SS - Shift Supervisor with a Senior Operator license  
 SRO - Individual with a Senior Operator license  
 RO - Individual with an Operator license  
 AO - Auxiliary operator

SM - Shift Manager  
 STA - Shift Technical Advisor

- a/ At least one of the required individuals must be assigned to the designated position for each unit.
- b/ At least one licensed Senior Operator or licensed Senior Operator Limited to Fuel Handling must be present during CORE ALTERATIONS on either unit, who has no other concurrent responsibilities.



TABLE 6.2-1 (Continued)

Except for the Shift Supervisor, the Shift Crew Composition may be one less than the minimum requirements of Table 6.2-1 for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the Shift Crew Composition to within the minimum requirements of Table 6.2-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent.

During any absence of the Shift Supervisor from the control room while the unit is in MODE 1, 2, 3 or 4, an individual (other than the Shift Technical Manager ~~Advisor~~\*) with a valid Senior Operator license shall be designated to assume the control room command function. During any absence of the Shift Supervisor from the control room while the unit is in MODE 5 or 6, an individual with a valid Senior Operator or Operator license shall be designated to assume the control room command function.

Shift Manager

- \* On occasions when there is a need for both the Shift Supervisor and the SRO to be absent from the control room, the ~~STA~~ shall be allowed to assume the control room command function and serve as the SRO in the control room provided that: (1) the Shift Supervisor is available to return to the control room within 10 minutes, (2) the assumption of SRO duties by the ~~STA~~ be limited to periods not in excess of 15 minutes duration and a total time not to exceed 1 hour during any 8-hour shift, and (3) the ~~STA~~ has an SRO license on the unit.

## ADMINISTRATIVE CONTROLS

### 6.2.3 MCGUIRE SAFETY REVIEW GROUP

#### FUNCTION

6.2.3.1 The McGuire Safety Review Group (MSRG) shall function to provide the review of plant design and operating experience for potential opportunities to improve plant safety; evaluation of plant operations and maintenance activities; and, to advise management on the overall quality and safety of plant operations. The MSRG shall make recommendations for revised procedures, equipment modifications, or other means of improving plant safety to appropriate station/corporate management.

#### COMPOSITION

6.2.3.2 The MSRG shall be composed of at least five dedicated, full-time engineers located on site. Each shall have either:  
or other technical professionals

- (1) A bachelor's degree in engineering or related science and at least 2 years professional level experience in his/her field, at least 1 year of which experience shall be in the nuclear field; or
- (2) At least 5 years of nuclear experience and hold or have held a Senior Reactor Operator license; or
- (3) At least 8 years of professional level experience in his/her field, at least 5 years of which experience shall be in the nuclear field.

A minimum of 50% of these personnel shall have the qualifications specified in (1) above. 3

#### RESPONSIBILITIES

6.2.3.3 The MSRG shall be responsible for:

- a. Review of selected plant operating characteristics and other appropriate sources of plant design and operating experience information for awareness and incorporation into the performance of other duties.
- b. Review of the effectiveness of corrective actions taken as a result of the evaluation of selected plant operating characteristics and other appropriate sources of plant design and operating experience information.
- c. Review of selected programs, procedures, and plant activities, including maintenance, modification, operational problems, and operational analysis.
- d. Surveillance of selected plant operations and maintenance activities to provide independent verification\* that they are performed correctly and that human errors are reduced to as low as practicable.
- e. Investigation of selected unusual events and other occurrences as assigned by Station Management or the Manager of Nuclear Safety Assurance.

\*Not responsible for sign-off function.

## ADMINISTRATIVE CONTROLS

### 6.2.3 MCGUIRE SAFETY REVIEW GROUP (Continued)

#### AUTHORITY

6.2.3.4 The ~~MSRG~~ shall report to and advise the Manager of Nuclear Safety Assurance, on those areas of responsibility specified in Section 6.2.3.

#### RECORDS

6.2.3.5 Records of activities performed by the ~~MSRG~~ shall be prepared and maintained for the life of the station. Summary reports of activities performed by the ~~MSRG~~ shall be forwarded each calendar month to the Manager of ~~Nuclear~~ Safety Assurance.

### 6.2.4 SHIFT TECHNICAL ADVISOR MANAGER

6.2.4.1 The Shift Technical Advisor shall serve in an advisory capacity to the Shift Supervisor. Manager Whose functions include those of a Shift Technical Advisor,

### 6.3 UNIT STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions and the supplemental requirements specified in Sections A and C of Enclosure 1 of the March 28, 1980 NRC letter to all licensees, except for the Radiation Protection Manager who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.

### 6.4 TRAINING

Training  
6.4.1 A retraining and replacement training program for the unit staff shall be maintained under the direction of the ~~Station~~ Manager and shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI N18.1-1971 and Appendix A of 10 CFR Part 55 and the supplemental requirements specified in Sections A and C of Enclosure 1 of the March 28, 1980 NRC letter to all licensees, and shall include familiarization with relevant industry operational experience identified by the ~~MSRG~~.

## ADMINISTRATIVE CONTROLS

### 6.5 REVIEW AND AUDIT

#### 6.5.1 TECHNICAL REVIEW AND CONTROL

##### ACTIVITIES

6.5.1.1 Each procedure and program required by Specification 6.8 and other procedures which affect nuclear safety, and changes thereto, shall be prepared by a qualified individual/organization. Each such procedure, and changes thereto, shall be reviewed by an individual/group other than the individual/group which prepared the procedure, or changes thereto, but who may be from the same organization as the individual/group which prepared the procedure, or changes thereto.

6.5.1.2 Proposed changes to the Appendix A Technical Specifications shall be prepared by a qualified individual/organization. The preparation of each proposed Technical Specifications change shall be reviewed by an individual/group other than the individual/group which prepared the proposed change, but who may be from the same organization as the individual/group which prepared the proposed change. Proposed changes to the Technical Specifications shall be approved by the Station Manager or his designee.

6.5.1.3 Proposed modifications to unit nuclear safety-related structures, systems and components shall be designed by a qualified individual/organization. Each such modification shall be reviewed by an individual/group other than the individual/group which designed the modification, but who may be from the same organization as the individual/group which designed the modification. ~~Proposed modifications to nuclear safety-related structures, systems, and components shall be approved prior to implementation by the Station Manager, or by the Operating Superintendent, the Technical Services Superintendent, the Superintendent of Integrated Scheduling, or the Maintenance Superintendent, as previously designated by the Station Manager.~~

6.5.1.4 Individuals responsible for reviews performed in accordance with Specifications 6.5.1.1, 6.5.1.2, and 6.5.1.3 shall be members of the ~~station~~ site supervisory staff, previously designated by the ~~Station Manager~~ to perform such reviews. Each such review shall include a determination of whether or not additional, cross-disciplinary, review is necessary. If deemed necessary, such review shall be performed by the appropriate designated ~~station~~ review personnel.

6.5.1.5 ~~Proposed tests and experiments which affect station nuclear safety and are not addressed in the FSAR or Technical Specifications shall be reviewed by the Station Manager, or by the Operating Superintendent, the Technical Services Superintendent, the Maintenance Superintendent, or the Superintendent of Integrated Scheduling as previously designated by the Station Manager.~~

Replaced  
with  
Insert  
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Site Vice President



INSERT B

Proposed modifications to nuclear safety-related structures, systems, and components shall be approved prior to implementation by the Station Manager; or for the Station Manager by the Mechanical Superintendent, the Operations Superintendent, the I and E Superintendent, or the Work Control Superintendent, as previously designated by the Station Manager.

INSERT C

Proposed tests and experiments which affect station nuclear safety and are not addressed in the FSAR or Technical Specifications shall be reviewed by the Station Manager; or for the Station Manager by the Mechanical Superintendent, the Operations Superintendent, the I and E Superintendent, or the Work Control Superintendent, as previously designated by the Station Manager.

## ADMINISTRATIVE CONTROLS

### ACTIVITIES (Continued)

Manager, Safety Assurance

Site

6.5.1.6 ALL REPORTABLE EVENTS and all violations of Technical Specifications shall be investigated and a report prepared which evaluates the occurrence and which provides recommendations to prevent recurrence. Such reports shall be approved by the Station Manager and transmitted to the Vice President, Nuclear Production, and to the Director of the Nuclear Safety Review Board.

6.5.1.7 The Station Manager shall assure the performance of special reviews and investigations, and the preparation and submittal of reports thereon, as requested by the Vice President, Nuclear Production.

Deleted 6.5.1.8 The station security program, and implementing procedures, shall be reviewed at least once per 12 months. Recommended changes shall be approved by the Station Manager or Superintendent of Station Services and transmitted to the Vice President, Nuclear Production, and to the Director of the Nuclear Safety Review Board.

Deleted 6.5.1.9 The station emergency plan and implementing procedures, shall be reviewed at least once per 12 months. Recommended changes shall be approved by the Station Manager and transmitted to the Vice President, Nuclear Production, and to the Director of the Nuclear Safety Review Board.

6.5.1.10 The Station Manager shall assure the performance of a review by a qualified individual/organization of every unplanned onsite release of radioactive material to the environs including the preparation and forwarding of reports covering evaluation, recommendations, and disposition of the corrective ACTION to prevent recurrence to the Vice President, Nuclear Production and to the Nuclear Safety Review Board.

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6.5.1.11 The Station Manager shall assure the performance of a review by a qualified individual/organization of changes to the PROCESS CONTROL PROGRAM, OFFSITE DOSE CALCULATION MANUAL, and Radwaste Treatment Systems.

6.5.1.12 The Station Manager shall ensure the performance of a review by a qualified individual/organization of the Fire Protection Program and implementing procedures and submittal of recommended changes to the Nuclear Safety Review Board, and Manager, Human Resources.

6.5.1.13 Reports documenting each of the activities performed under Specifications 6.5.1.1 through 6.5.1.12 shall be maintained. Copies shall be provided to the Vice President, Nuclear Production, and the Nuclear Safety Review Board.

Site

### 6.5.2 NUCLEAR SAFETY REVIEW BOARD (NSRB)

#### FUNCTION

6.5.2.1 The NSRB shall function to provide independent review and audit of designated activities in the areas of:

- Nuclear power plant operations,
- Nuclear engineering,
- Chemistry and radiochemistry,

## ADMINISTRATIVE CONTROLS

### FUNCTION (Continued)

- d. Metallurgy,
- e. Instrumentation and control,
- f. Radiological safety,
- g. Mechanical and electrical engineering, and
- h. Administrative control and quality assurance practices.

### ORGANIZATION

Executive Vice President, Power Generation

6.5.2.2 The Director, members and alternate members of the NSRB shall be appointed in writing by the Vice President, Nuclear Production, and shall have an academic degree in an engineering or physical science field; and in addition, shall have a minimum of 5 years technical experience, of which a minimum of 3 years shall be in one or more areas given in Specification 6.5.2.1. No more than two alternates shall participate as voting members in NSRB activities at any one time.

INSERT D

6.5.2.3 The NSRB shall be composed of at least five members, including the Director. Members of the NSRB may be from the Nuclear Production Department, from other departments within the Company, or from external to the Company. A maximum of one member of the NSRB may be from the McGuire Nuclear Station Site.

Generation

6.5.2.4 Consultants shall be utilized as determined by the NSRB Director to provide expert advice to the NSRB.

6.5.2.5 Staff assistance may be provided to the NSRB in order to promote the proper, timely, and expeditious performance of its functions.

6.5.2.6 The NSRB shall meet at least once per calendar quarter during the initial year of operation following fuel loading and at least once per 6 months thereafter.

6.5.2.7 The quorum of the NSRB necessary for the performance of the NSRB review and audit functions of these Technical Specifications shall consist of the Director, or his designated alternate, and at least four other NSRB members including alternates. No more than a minority of the quorum shall have line responsibility or operation of McGuire Nuclear Station.

In special cases, candidates for appointment without an academic degree in engineering or physical science may be qualified with a minimum of eight years experience in one of the areas in Specification 6.5.2.1.

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## ADMINISTRATIVE CONTROLS

### REVIEW

6.5.2.8 The NSRB shall review:

- a. The safety evaluations for: (1) changes to procedures, equipment, or systems, and (2) tests or experiments completed under the provision of Section 50.59, 10 CFR to verify that such actions did not constitute an unreviewed safety question;
- b. Proposed changes to procedures, equipment or systems which involve an unreviewed safety question as defined in Section 50.59, 10 CFR;
- c. Proposed tests or experiments which involve an unreviewed safety question as defined in Section 50.59, 10 CFR;
- d. Proposed changes in Technical Specifications or this Operating License;
- e. Violations of Codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance;
- f. Significant operating abnormalities or deviations from normal and expected performance of unit equipment that affect nuclear safety;
- g. All REPORTABLE EVENTS;
- h. All recognized indications of an unanticipated deficiency in some aspect of design or operation of structures, systems or components that could affect nuclear safety;
- i. Quality <sup>Verification</sup> ~~Assurance~~ Department audits relating to station operations and actions taken in response to these audits; and
- j. Reports of activities performed under the provisions of Specifications 6.5.1.1 through 6.5.1.11.

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### AUDITS

site

6.5.2.9 Audits of ~~unit~~ activities shall be performed under the cognizance of the NSRB. These audits shall encompass:

- a. The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions ~~at least once per 12 months~~;
- b. The performance, training, and qualifications of the entire <sup>Station</sup> ~~unit~~ staff ~~at least once per 12 months~~;



## ADMINISTRATIVE CONTROLS

### AUDITS (Continued)

- c. The results of actions taken to correct deficiencies occurring in unit equipment, structures, systems, or method of operation that affect nuclear safety ~~at least once per 6 months~~;
- d. The performance of activities required by the Operational Quality Assurance Program to meet the criteria of Appendix B, 10 CFR Part 50, ~~at least once per 24 months~~;
- e. The Emergency Plan and implementing procedures ~~at least once per 12 months~~;
- f. The Security Plan and implementing procedures ~~at least once per 12 months~~;
- g. The Facility Fire Protection programmatic controls including the implementing procedures ~~at least once per 24 months by qualified licensee QA personnel~~;
- h. The fire protection equipment and program implementation ~~at least once per 12 months~~ utilizing either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year;
- i. The Radiological Environmental Monitoring Program and the results thereof ~~at least once per 12 months~~;
- j. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures ~~at least once per 24 months~~;
- k. The PROCESS CONTROL PROGRAM and implementing procedures for SOLIDIFICATION of radioactive wastes ~~at least once per 24 months~~;
- l. The performance of activities required by the Quality Assurance Program for effluent and environmental monitoring ~~at least once per 12 months~~, and
- m. Any other area of <sup>Site</sup> ~~unit~~ operation considered appropriate by the NSRB or the Vice President, Nuclear Production.

### AUTHORITY

Executive Vice President, Power Generation.

6.5.2.10 The NSRB shall report to and advise the ~~Vice President, Nuclear Production~~, or those areas of responsibility specified in Specifications 6.5.2.8 and 6.5.2.9.

## ADMINISTRATIVE CONTROLS

### RECORDS

6.5.2.11 Records of NSRB activities shall be prepared, approved, and distributed as indicated below:

- a. Minutes of each NSRB meeting shall be prepared, approved, and forwarded to the Vice President, Nuclear Generation Production, and to the Executive Vice President, Engineering, Construction, and Production, within 14 days following each meeting. Power Generation
- b. Reports of reviews encompassed by Specification 6.5.2.8 above, shall be prepared, approved and forwarded to the Vice President, Nuclear Generation Production, and to the Executive Vice President, Engineering, Construction, and Production, within 14 days following completion of the review; and Power Generation
- c. Audit reports encompassed by Specification 6.5.2.9 above, shall be forwarded to the Vice President, Nuclear Generation Production, and to the Executive Vice President, Engineering, Construction, and Production, and to the management positions responsible for the areas audited within 30 days after completion of the audit by the auditing organization. Power Generation

### 6.6. REPORTABLE EVENT ACTION

6.6.1 The following actions shall be taken for REPORTABLE EVENTS:

- a. The Commission shall be notified and a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and
- b. Each REPORTABLE EVENT shall be reviewed by the Station Manager; or Operations  
by: (1) the Operating Superintendent, (2) the Technical Services I and E Superintendent, (3) the Maintenance Superintendent, or (4) the Work Control Superintendent of Integrated Scheduling, as previously designated by the Station Manager, and the results of the review shall be submitted to the NSRB and the Vice President, Nuclear Production.  
Site Mechanical

### 6.7. SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety Limit is violated:

- a. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. The Vice President, Nuclear Production, and the NSRB shall be notified within 24 hours; Site
- b. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the Operations Superintendent and the Station Manager. This report shall describe: (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems, or structures, and (3) corrective action taken to prevent recurrence;

## ADMINISTRATIVE CONTROLS

### SAFETY LIMIT VIOLATION (Continued)

Site

- c. The Safety Limit Violation Report shall be submitted to the Commission, the NSRB and the Vice President, Nuclear Production, within 14 days of the violation; and
- d. Critical operation of the unit shall not be resumed until authorized by the Commission.

### 6.8 PROCEDURES AND PROGRAMS

6.8.1 Written procedures shall be established, implemented, and maintained covering the activities referenced below:

- a. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978;
- b. The applicable procedures required to implement the requirements of NUREG-0737;
- ~~Deleted~~ c. ~~Security Plan implementation;~~
- ~~Deleted~~ d. ~~Emergency Plan implementation;~~
- e. PROCESS CONTROL PROGRAM implementation;
- f. OFFSITE DOSE CALCULATION MANUAL implementation; and
- g. Quality Assurance Program for effluent and environmental monitoring.
- h. Fire Protection Program implementation.
- i. Commitments contained in FSAN Chapter 16.0

6.8.2 Each procedure of Specification 6.8.1 above, and changes thereto, shall be reviewed and approved by the Site Vice President or his designee Station Manager; or by: (1) the Operating Superintendent, (2) the Technical Services Superintendent, (3) the Maintenance Superintendent, or (4) the Superintendent of Integrated Scheduling as previously designated by the Station Manager; prior to implementation and shall be reviewed periodically as set forth in administrative procedures. For Applied Science Center procedures which implement offsite environmental, technical, and laboratory activities, the above review and approval may be performed by the Manager, Production Environmental Services, or designated Technical System Manager in the Production Support Department, in lieu of the individuals specified above.

6.8.3 Temporary changes to procedures of Specification 6.8.1 above may be made provided: General

- a. The intent of the original procedure is not altered;
- b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Operator license on the unit affected; and

\*Review and approval may be performed by the Superintendent of Station Services.

## ADMINISTRATIVE CONTROLS

### PROCEDURES AND PROGRAMS (Continued)

Site Vice President or his Designee

- c. The change is documented, reviewed, and approved by the ~~Station Manager~~, or by: (1) the Operating Superintendent, (2) the Technical Services Superintendent, (3) the Maintenance Superintendent, or (4) the Superintendent of Integrated Scheduling, as previously designated by the Station Manager, within 14 days of implementation.

6.8.4 The following programs shall be established, implemented, and maintained:

a. Reactor Coolant Sources Outside Containment

A program to reduce leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. The systems include RHR, Boron Recycle, Refueling Water, Liquid Waste, Waste Gas, Safety Injection, Chemical and Volume Control, Containment Spray, and Nuclear Sampling. The program shall include the following:

- 1) Preventive maintenance and periodic visual inspection requirements, and
- 2) Integrated leak test requirements for each system at refueling cycle intervals or less.

b. In-Plant Radiation Monitoring

A program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

- 1) Training of personnel,
- 2) Procedures for monitoring, and
- 3) Provisions for maintenance of sampling and analysis equipment.

c. Secondary Water Chemistry

A program for monitoring of secondary water chemistry to inhibit steam generator tube degradation. This program shall include:

- 1) Identification of a sampling schedule for the critical variables and control points for these variables,
- 2) Identification of the procedures used to measure the values of the critical variables,
- 3) Identification of process sampling points, which shall include monitoring the discharge of the condensate pumps for evidence of condenser in-leakage,



NO CHANGES ON PAGES 6-16  
through 6-22

## ADMINISTRATIVE CONTROLS

### RECORD RETENTION (Continued)

- g. Records of training and qualification for current members of the unit staff;
- h. Records of inservice inspections performed pursuant to these Technical Specifications;
- i. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59;
- j. Records of meetings of the NSRB and reports required by Specification 6.5.1.12;
- k. Records of the service lives of all snubbers including the date at which the service life commences and associated installation and maintenance records;
- l. Records of secondary water sampling and water quality; and
- m. Records of analyses required by the Radiological Environmental Monitoring Program that would permit evaluation of the accuracy of the analysis at a later date. This should include procedures effective at specified times and QA records showing that these procedures were followed.
- n. Records of reviews performed for changes made to the ODCM and the PCP.

6.10.3 Records of quality assurance activities required by the QA Manual shall be retained for a period of time required by ANSI N45.2.9-1974.

### 6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

### 6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.203(c)(2) of 10 CFR 20, each high radiation area, as defined in 10 CFR Part 20, in which the intensity of radiation is equal to or less than 1000 mrem/hr at 45 CM (18 in.) from the radiation source or from any surface which the radiation penetrates shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP). Individuals qualified in radiation protection procedures (e.g., ~~Health Physics~~ Technician) or personnel continuously escorted by such individuals may be exempt from the RWP issuance requirement during the performance of their assigned duties in high radiation areas with exposure rates equal to or less than 1000 mrem/hr provided they are otherwise following plant radiation protection procedures for entry into high radiation areas.

## ADMINISTRATIVE CONTROLS

### HIGH RADIATION AREA (Continued)

Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area; or
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them; or
- c. An individual qualified in radiation protection procedures with a radiation dose rate monitoring device who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the Station Health Physicist in the RWP.

#### Radiation Protection Manager

6.12.2 In addition to the requirements of Specification 6.12.1, areas accessible to personnel with radiation levels greater than 1000 mrem/hr at 45 CM (18 in.) from the radiation source or from any surface which the radiation penetrates shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the Shift Foreman on duty and/or health physics supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work area and the maximum allowable stay time for individuals in that area. In lieu of the stay time specification of the RWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.

For individual areas accessible to personnel with radiation levels greater than 1000 mrem/hr\* that are located within large areas, such as PWR containment, where no enclosure exists for purposes of locking, and no enclosure can be reasonably constructed around the individual areas, that area shall be barricaded, conspicuously posted, and a flashing light shall be activated as a warning device.

### 6.13 PROCESS CONTROL PROGRAM (PCP)

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

6.13.2 Licensee-initiated changes to the PCP:

- a. Shall be documented and records of reviews performed shall be retained as required by Specification 6.10.3n. This documentation shall contain:

\* Measurement made at 18 inches from source of radioactivity.

ADMINISTRATIVE CONTROLSPROCESS CONTROL PROGRAM (PCP) (Continued)

- 1) Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
  - 2) A determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State, or other applicable regulations.
- b. Shall become effective upon review and acceptance by the station manager and a qualified individual/organization.

6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

6.14.1 The ODCM shall be approved by the Commission prior to implementation.

6.14.2 Licensee-initiated changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained as required by Specification 6.10.3n. This documentation shall contain:
  - 1) Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change(s) and
  - 2) A determination that the change will maintain the level of radioactive effluent control required by 10 CFR 20.106, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
- b. Shall become effective upon review and acceptance by the station manager and a qualified individual/organization.
- c. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Semiannual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.



## ADMINISTRATIVE CONTROLS

### 6.15 MAJOR CHANGES TO RADIOACTIVE LIQUID, GASEOUS, AND SOLID WASTE TREATMENT SYSTEMS\*

#### 6.15.1 Licensee-initiated major changes to the Radioactive Waste Systems (liquid, gaseous, and solid):

- a. Shall be reported to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the evaluation was reviewed by the Station Manager. The discussion of each change shall contain:
  - 1) A summary of the evaluation that led to the determination that the change could be made in accordance with 10 CFR Part 50.59;
  - 2) Sufficient detailed information to totally support the reason for the change without benefit of additional or supplemental information;
  - 3) A detailed description of the equipment, components, and processes involved and the interfaces with other plant systems;
  - 4) An evaluation of the change, which shows the predicted releases of radioactive materials in liquid and gaseous effluents and/or quantity of solid waste that differ from those previously predicted in the License application and amendments thereto;
  - 5) An evaluation of the change, which shows the expected maximum exposures to individual in the UNRESTRICTED AREA and to the general population that differ from those previously estimated in the License application and amendments thereto;
  - 6) A comparison of the predicted releases of radioactive materials, in liquid and gaseous effluents and in solid waste, to the actual releases for the period prior to when the changes are to be made;
  - 7) An estimate of the exposure to plant operating personnel as a result of the change; and
  - 8) Documentation of the fact that the change was reviewed and found acceptable by the Station Manager or the Chemistry Manager.
- b. Shall become effective upon review and acceptance by a qualified individual/organization.

\*Licensees may choose to submit the information called for in this specification as part of the annual PSAR update.

ATTACHMENT 2

SUMMARY AND JUSTIFICATION

### Summary and Justification

The changes we are proposing are itemized below, according to the affected section of Chapter 6 of the Technical Specifications. The majority of the changes are in response to the realignment, re-titling and other restructuring activities which were effective November 1, 1991.

Attachment 4 consists of draft revised pages of the McGuire FSAR, Chapter 13, which describes the new organization. Basically, all station activities now fall under the responsibility of the Site Vice President who can then delegate to the Station Manager or other supervisory staff as appropriate for the activity involved. This transition to the "site" concept accounts for many of the changes in responsibility and lines of authority for the onsite and offsite organizations.

Several other proposed changes are in response to Standard Review Plan (SRP), Section 17.3 which was issued in August, 1990. As discussed with members of your staff on October 30, 1991, we are in the process of revising the Duke QA Topical, in which we will implement the guidance in SRP 17.3. These changes, therefore, will provide consistency with both documents.

One other proposed change would add an alternative qualification for NSRB members who have extensive experience in an area of expertise in lieu of a technical degree.

All of these changes are summarized below:

#### Section Summary and Justification of Proposed Changes

- 6.1.2 This change reflects realignment of authority to the site, and the larger group of affected personnel who will be at the Site. This change is purely administrative and it can therefore be considered acceptable.
- 6.2.1 This specification defines the requirements, authority and the current lines of responsibility of the offsite and onsite organizations. As discussed above, the nuclear site organization centralizes the resources needed for safe and efficient operation of the plant. This change reflects the realignment of management authority which is consistent with the recommendation of Generic Letter 88-06, and is thus acceptable.
- 6.2.1T In this table the title of Shift Manager has replaced that of Shift Technical Advisor. The function and activities of the Shift Manager encompass and exceed the requirements of a Shift Technical Advisor, as

defined in "Clarification of TMI-requirements," NUREG 0737. Thus this change can be considered acceptable.

- 6.2.2 The term "Health Physics" has been replaced with "Radiation Protection" throughout the Duke System. This is purely an administrative change with no effect on function and should be considered acceptable.

In (c) the asterisk and associated footnote have been deleted because they are no longer needed. This footnote was inserted during an earlier time when there was only one technician on shift. We now have ample shift coverage due to emergency staffing commitments, making this requirement obsolete.

This change would also help simplify section 6.2.2 by eliminating an unnecessary requirement. This can be considered an acceptable administrative change.

In (f), the word "station" is used to denote staff who report to the Station Manager and who are engaged in the "hands-on" operation and maintenance of the station. The common terminology for auxiliary operators is now "non-licensed operators".

- 6.2.3.1- The deletion of the M in MSRG is purely editorial. It was expressed by the respective site staffs that the term "Safety Review Group", or "SRG", is sufficient at each site and that specifying the station is unnecessary. This administrative change should be considered acceptable.

- 6.2.3.3- The deletion of the term "Nuclear" in Nuclear Safety Assurance is an administrative change, which reflects the broader scope for this position. This change should be considered acceptable since it is purely administrative.

- 6.2.3.2 With the reorganization, the SRG work unit has increased in size due to the inclusion of personnel from the former on-site quality assurance group, comprised of quality verification specialists, some of which are not degreed. Accordingly we are proposing to revise this section to reflect the expanded resources of the SRG, and to clearly establish that at least 3 persons should meet criterion (1).

These changes are editorial and administrative and do not diminish or alter the function of the site SRG, and therefore should be considered acceptable.

- 6.2.4 The title of Shift Manager (SM) has replaced that of Shift Technical Advisor (STA), but its functions and activities encompass and exceed the requirements of a Shift Technical Advisor, as defined in "Clarification of TMI-Requirements", NUREG 0737. Thus this change can be considered acceptable.
- 6.4 This change reflects realignment of authority or responsibility as discussed above and described in TS 6.2.1, and draft revised MNS FSAR, Chapter 13.2. The new title of Training Manager reflects the broader concept of site responsibility. It is administrative in nature and thus should be considered acceptable.
- 6.5.1.2 It was felt that the Station Manager should be able to delegate his approval authority to the appropriate member of the station supervisory staff in the event of his unavailability, since he and his staff have overall responsibility for the safe operation of the plant. This is an administrative change only and should be considered acceptable.
- 6.5.1.3 It was felt that the Station Manager should be able to delegate his approval authority to the appropriate member of the station supervisory staff in the event of his unavailability, since he and his staff have overall responsibility for the safe operation of the plant.
- The key supervisory titles have been revised to reflect the reorganization and their re-naming. These changes are purely administrative and should be acceptable.
- 6.5.1.4 These changes reflect realignment of authority or responsibility as discussed above and described in proposed TS 6.2.1, and draft revised MNS FSAR, Chapter 13. These changes are administrative and therefore should be considered acceptable.
- 6.5.1.5 It was felt that the Station Manager should be able to delegate his approval authority to the appropriate member of the station supervisory staff in the event of his unavailability, since he and his staff have overall responsibility for the safe operation of the plant.
- The key supervisory titles have been revised to reflect the reorganization and their re-naming. These changes are purely administrative and should be acceptable.
- 6.5.1.6 This change reflects realignment of authority or responsibility as discussed above and described in



proposed TS 6.2.1, and draft revised MNS FSAR, Chapter 13.

This change also reflects the current philosophy that the Safety Review Group should report to a management that is independent and separate from that of the station and the NSRB. We feel that this is primarily administrative but also philosophically correct and therefore acceptable.

- 6.5.1.7 This change reflects realignment of authority or responsibility as discussed above and described in proposed TS 6.2.1, and draft revised MNS FSAR, Chapter 13.

This change also reflects the current philosophy that the Safety Review Group should report to a management that is independent and separate from that of the station and the NSRB. We feel that this is primarily administrative but also philosophically correct and therefore acceptable.

- 6.5.1.8 These requirements are being relocated to the Security Plan which will be maintained and implemented by the Site Security Manager. This is consistent with guidance provided by SRP 17.3, which encourages the implementing manager to become responsible for the quality of the plans and implementing procedures. Also, 10CFR 50.54(p) requires an annual review of security program procedures, with directions for reporting the results to management. We feel this requirement is redundant to the existing regulation in 10CFR 50.54; therefore this change should be accepted.

- 6.5.1.9 Consistent with 10CFR 50.54(t), the Site Emergency Plan provides for the annual review of all procedures. This requirement is being relocated to the Emergency Plan which will be maintained and implemented by the Site Emergency Manager. This is consistent with guidance provided by SRP 17.3, which encourages the implementing manager to become responsible for the quality of plans and the implementing procedures. We feel this requirement is redundant to the existing regulation in 10CFR 50.54; therefore this change should be accepted.

- 6.5.1.10 These changes reflect realignment of authority or responsibility as discussed above and described in proposed TS 6.2.1, and draft revised MNS FSAR, Chapter 13.

This change is also consistent with Specifications

6.5.1.6 and 6.5.1.7 where the Manager of Safety Assurance assures the review of reportable events and special investigations.

These changes are administrative and therefore should be considered acceptable.

- 6.5.1.11 These changes reflect realignment of authority or responsibility as discussed above and described in proposed TS 6.2.1, and draft revised MNS FSAR, Chapter 13.

That the responsibility for this review should fall to the Manager of Safety Assurance is consistent with the philosophy expressed for the other activities in this Section concerned with reportable special reviews. This change is administrative and should be considered acceptable.

- 6.5.1.12 These changes reflect realignment of authority or responsibility as discussed above and described in proposed TS 6.2.1, and draft revised MNS FSAR, Chapter 13.

That the responsibility for this review should fall to the Manager of Safety Assurance is consistent with our philosophy expressed for the other activities in this Section concerned with special reviews.

The Manager, Human Resources now has responsibility for the Fire Protection Program. These changes are primarily administrative and thus should be considered acceptable.

- 6.5.1.13 This change reflects the realignment of authority to the site. These changes are clearly editorial or administrative and therefore should be considered acceptable.

- 6.5.2.2 The naming of Executive Vice President, Power Generation reflects the realignment of reporting authority for the NSRB as discussed in draft revised MNS FSAR Chapter 13 and in the QA Topical Section 17.3. This change is administrative, since the functions of the NSRB are unaffected but we also believe this change is philosophically correct and acceptable.

The other proposed change in this section would increase the pool of qualified individuals from which candidates could be appointed to independently review operational phase activities. The requirements for

those who operate the plant are at least this flexible. The appointment would be subject to the approval of the Executive Vice President, Power Generation.

This proposed change is not directly related to the Duke reorganization or the requisite revisions to our licensing documents. If its consideration might slow down the review of all other changes in this chapter, we would prefer to consider it separately in another submittal.

- 6.5.2.3 These changes reflect realignment of authority or responsibility as discussed above and described in proposed TS 6.2.1, draft revised MNS FSAR, Chapter 13, and the revised QA Topical Report.

The use of the term "site" assures the continued independent nature of the NSRB. These changes are administrative and should be considered acceptable.

- 6.5.2.8 This change reflects the renaming of the Department, the function of which is unchanged. This administrative change should be considered acceptable.

The "12" corrects a typographical error and is purely editorial.

- 6.5.2.9 We are applying here the broader term "site" to reflect all those activities associated with the station, not those that are only specific to the operation of the unit.

The term "station" in (b) is consistent with its use in Specification 6.2.2(f) and implies those people reporting to the Station Manager, responsible for operation and maintenance of the unit. These changes are administrative and do not alter the function of the NSRB organization and therefore should be considered acceptable.

Audit frequencies are being deleted here but in the revised QA Topical we are preparing the following statement, using SRF 17.3 guidance on planned and periodic assessments scheduling and resource allocation:

"Audits of selected aspects of operational phase activities are performed with a frequency commensurate with safety significance and in such a manner as to assure that an audit of all safety related functions is completed within a period of two (2) years. The audit

system is reviewed periodically and revised as necessary to assure coverage commensurate with current and planned activities."

The naming of Executive Vice President, Power Generation reflects the realignment of reporting authority for the NSP as discussed in draft revised MNS FSAR Chapter 13 and in the QA Topical Section 17.3. This change is administrative, since the functions of the NSRB are unaffected but we also believe this change is philosophically correct and acceptable.

These changes do not alter the function nor diminish the quality of the Audit Program. Therefore, they should be considered acceptable.

6.5.2.10 These changes reflect realignment of authority or responsibility as discussed above and described in proposed TS 6.2.1. These reporting requirements to Senior Management are also discussed in the revised QA Topical Report in Section 17.3.3 "Self Assessment". These changes are administrative only and therefore are acceptable.

6.5.2.11 These changes reflect realignment of authority or responsibility as discussed above and described in proposed TS 6.2.1. These reporting requirements to Senior Management are also discussed in the revised QA Topical Report in Section 17.3.3 "Self Assessment". These changes are administrative only and therefore are acceptable.

6.6.1 These changes reflect realignment of authority or responsibility as discussed above and described in proposed TS 6.2.1, and draft revised MNS FSAR, Chapter 13.

The key supervisory titles have been revised to reflect the reorganization and their re-naming. These changes are purely administrative and should be acceptable.

6.7.1 The changes in (a) and (c) reflect realignment of authority or responsibility to the site as discussed above and described in TS 6.2.1, and draft revised MNS FSAR, Chapter 13.

Operations Superintendent in (b) is simply renaming of the position. These changes are administrative and therefore should be considered acceptable.

6.8.1 (c) and (d) are being removed from the Technical



Specifications and relocated to Security Plan and Emergency Plan, respectively, because the procedures covering these activities are the responsibility of the Site Emergency Planner and the Site Security Manager and, as such, are included in their respective Site Plans. This is consistent with guidance provided in revised Standard Review Plan Section 17.3, which encourages the delegation of authority to the implementing manager. This change will simplify this specification and is administrative. It should be considered acceptable.

- 6.8.2 Review and approval of procedures was changed to reflect realignment of authority or responsibility, since some procedures no longer fall under the responsibility of the Station Manager (e.g., fire protection, performance procedures, emergency planning). The Site Vice President can delegate to the implementing manager, consistent with the revised QA Topical Report and guidance given in SRP 17.3, which encourages the delegation of authority to the implementing manager.

The General Manager, Environmental Services, now has responsibility for all offsite environmental activities. The term "Applied Science Center" is no longer correct and is therefore unnecessary. All of these changes are administrative and as such should be considered acceptable.

- 6.8.3 These changes in (c) reflect realignment of authority or responsibility as discussed above and in proposed TS 6.2.1, and draft revised MNS FSAR, Chapter 13. These changes also simplify the specification and make it consistent with revised 6.8.2. These changes are administrative and should be considered acceptable.

- 6.12.1 The term "Health Physics" has been replaced with "Radiation Protection" throughout the Duke System. Likewise, the "Station Health Physicist" has been renamed. These are purely administrative changes with no effect on function and should be considered acceptable.

- 6.15(a)8 This change allows the Chemistry Manager, who has line responsibility over radiological effluent controls, to review and approve changes to the Radwaste Treatment System. This is consistent with Standard Review Plan SRP 17.3, which encourages the delegation of authority to the implementing manager. It also allows additional flexibility in the case where one or the other is unavailable. This change is administrative and should



be considered acceptable.

ATTACHMENT 3

ANALYSIS OF SIGNIFICANT HAZARDS CONSIDERATION

### Analysis of Significant Hazards Consideration:

As Required by 10CFR 50.91, this analysis is provided concerning whether the proposed amendments involve significant hazards considerations, as defined by 10CFR 50.92. Standards for determination that a proposed amendment involves no significant hazards considerations are if operation of the facility in accordance with the proposed amendment would not: 1) involve a significant increase in the probability or consequences of an accident previously evaluated; or 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety

The proposed amendments would not involve a significant increase in the probability or consequences of a previously evaluated accident. Nor would they create the possibility of a new or different kind of accident from any accident previously evaluated. The changes do not have any impact upon the design or operation of plant equipment; therefore, they cannot serve to initiate a new type of accident.

The proposed amendments would not involve a reduction in a margin of safety. The changes would not impact the design or operation of any plant systems or components.

Based upon the preceding analysis, Duke Power Company concludes that the proposed amendments do not involve a Significant Hazards Consideration.

ATTACHMENT 4

McGUIRE FSAR CHAPTER 13

REVISED PAGES

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## CHAPTER 13. CONDUCT OF OPERATIONS



## 13.1 ORGANIZATION

### 13.1.1 CORPORATION ORGANIZATION

- 1 The corporate structure of Duke Power Company pertinent to Nuclear Station operation is shown in  
1 Figure 13-1 on page 13-10 and Figure 13-2 on page 13-11.

#### 1 13.1.1.1 Corporate Functions, Responsibilities and Authorities

Duke has over 75 years of experience in the design, construction and operation of electric generating stations. As of 1987, Duke operated eight conventional steam-electric stations with a capacity of 6,526 MWe, three nuclear steam-electric stations with a capacity of 7,170 MWe, 25 hydroelectric stations with a capacity of 842 MWe, four pumped storage units with a capacity of 610 MWe and combustion turbine and diesel peaking units with a capacity of 599 MWe, for a total system capacity of 15,747 MWe.

Company involvement in nuclear power began in the early 1950's with various personnel receiving nuclear training. Selected personnel have been involved full time in nuclear projects since the mid-1950's. Duke participated in the Carolina-Virginia Nuclear Power Associates (CVNPA), which resulted in a 17,000 kWe nuclear steam-electric unit at Parr, South Carolina. This unit, the Carolinas-Virginia Tube Reactor (CVTR), produced electricity over the period 1963 to 1967 as part of a five-year operating research program. Duke's three unit Oconee Nuclear Station began operation in 1973, the two unit McGuire Nuclear Station began operation in 1981, and two unit Catawba Nuclear station began operation in 1984. As a result of these and other assignments, many engineering personnel in the Duke organization have had prior nuclear experience as well as extensive experience in the power field.

Various departments within the Company have responsibility for design, construction, quality assurance and operation of each nuclear station. Duke contracts with a nuclear steam supply system (NSSS) vendor for the design and manufacture of the complete NSSS. The NSSS vendor also provides technical consultation in areas such as construction, testing, startup and initial fuel loading.

Duke's corporate functions, responsibilities and authorities for quality assurance are addressed in Topical Report, DUKE-1A.

The Chairman of the Board and Chief Executive Officer has overall responsibility for corporate functions involving planning, design, construction and operation of the Company's generation, transmission, and distribution facilities, as well as other staff functions.

- 1 Line responsibilities relative to Nuclear Generation are delegated through the Executive Vice President,  
1 Power Generation Group, to the Senior Vice President, Nuclear Generation as shown in Figure 13-1 on  
1 page 13-10 and Figure 13-2 on page 13-11.

#### 13.1.1.2 Organization for Design and Construction

- 1 Effective November 1, 1991, Duke reorganized to create the Power Generation Group, which includes the  
1 Nuclear Generation Department. Separate organizations for design and construction ceased to exist.

### 1 13.1.2 OPERATING ORGANIZATION

**13.1.2.1 Nuclear Generation Department Organization**

Duke's Nuclear Generation Department, headed by the Senior Vice President, Nuclear Generation, has corporate responsibility for overall nuclear safety, as established by Technical Specifications. Reporting to the Senior Vice President is a Vice President for each nuclear site, and the General Manager, Nuclear Services.

The Nuclear Generation Department Organization is shown in Figure 13-3 on page 13-12.

**13.1.2.2 Deleted****13.1.2.3 Nuclear Site****13.1.2.3.1 Site Organization**

The nuclear site organization centralizes the resources for safe and efficient nuclear plant operations under a vice president at the nuclear site.

The Vice President of McGuire Nuclear site has the responsibility for overall plant nuclear safety as established by Technical Specifications. The site staff is fully capable and equipped to handle all situations involving safety of the station and public. The Nuclear site staff is shown on Figure 13-4 on page 13-13.

As established by the Duke Quality Assurance Program Topical Report, Duke-1A, anyone involved in quality activities in the Duke organization has the authority and responsibility to stop work if they discover deficiencies in quality.

**13.1.2.3.2 Personnel Functions, Responsibilities and Authorities**

The functions and responsibilities of key site supervisory staff are described in the succeeding paragraphs.

**(a) Station Manager**

The Station Manager reports to the Vice President, McGuire Site and has direct responsibility for operating the station in a safe, reliable and efficient manner. He is responsible for protection of the station staff and the general public from radiation exposure and/or any other consequences of an accident at the station. He bears the responsibility for compliance with the facility operating license.

**(b) Operations Superintendent**

The Operations Superintendent has the responsibility for directing the actual day-to-day operation of the station. In the event of the absence of the Station Manager, the Operations Superintendent, if so designated, assumes the responsibilities and authority of the Station Manager.

**(c) Shift Operations Manager**

The Shift Operations Manager is responsible for directing the activities of the on-shift licensed and non-licensed operations personnel.

**(d) Shift Supervisor**

A Shift Supervisor is responsible for the actual operation of the station on his assigned shift. He directs the activities of the operators on his shift and is cognizant of all maintenance activity being performed while he is on duty. The Shift Supervisor on duty has both the authority and the obligation to shut down a unit if, in his opinion, conditions warrant this action.

**(e) Assistant Shift Supervisor**

An Assistant Shift Supervisor assists the Shift Supervisor in operation of the station on his assigned shift. The Assistant Shift Supervisor on duty has both the authority and the obligation to shut down a unit if, in his opinion, conditions warrant this action.

**(f) Control Operator**

A Control Operator is responsible for the actual operation of a Unit on his assigned shift. The Control Operator has both the authority and obligation to shut down a unit if, in his opinion, conditions warrant this action.

**(g) Radiation Protection Manager**

The Radiation Protection Manager has the responsibility for conducting the Radiation Protection program. His duties include the training of personnel, continuous determination of the radiological status of the station, surveillance of radioactive waste disposal operations, conducting the radiological environmental monitoring program and maintaining all required records. He has direct access to the Station Manager in matters concerning any phase of radiological protection.

**(h) Chemistry Manager**

The Chemistry Manager is responsible for overall chemistry and radiochemistry requirements, with special emphasis on primary and secondary system water chemistry.

**(i) Mechanical Superintendent**

The Mechanical Superintendent is responsible for directing maintenance activities in connection with mechanical and non-instrument related electrical equipment.

**(j) Instrument and Electrical Superintendent**

The Instrument and Electrical Superintendent has responsibility for preventive maintenance and repair of all instrumentation and controls, with the exception of certain electrical instrumentation applying only to the generators and switching station, which are maintained on a system basis by other departments. He also supervises computer maintenance.

**(k) Work Control Superintendent**

The Work Control Superintendent is responsible for directing the station's operational and outage activities through the coordination, development, shift and outage management of a timely and effective integrated station schedule.

**(l) Safety Assurance Manager**

- 1 The Manager of Safety Assurance is responsible for directing the activities of Environmental and  
1 Regulatory Compliance, Safety Review, Emergency Preparedness, INPO Coordinator, and HPES.

1 (m) Human Resources Manager

- 1 The Human Resources Manager is responsible for coordination of site administrative functions including  
1 clerical, document control, safety, fire protection, training and security.

1 (n) Shift Manager

- 1 A Shift Manager provides evaluation and assessment of both normal and unanticipated transients.

#### 13.1.2.4 Shift Crew Composition

- For unit operations, an operating shift consists of one Shift Supervisor who holds a Senior Reactor  
Operator license, one individual who holds a Senior Reactor Operator license, three persons with  
1 Operator licenses, three auxiliary operators, and one Shift Manager (who fulfills the STA role). Detailed  
shift crew requirements are defined in Chapter 6 of the Technical Specifications.

#### 13.1.2.5 Nuclear Services Organization

- 1 The Nuclear Services organization provides corporate oversight and specific technical services to all Duke  
1 Nuclear sites. This organization is headed by the General Manager, Nuclear Services. The organization  
1 chart is shown in Figure 13-5 on page 13-14. The function and responsibilities are described in the  
1 succeeding paragraphs.

1 1. Nuclear Engineering

- 1 This organization has responsibility for safety analysis, probabilistic risk assessments, reactor core  
1 design, out-of-core fuel management, core thermal hydraulic design, fuel fabrication, and failed fuel  
1 analysis.

1 2. Engineering/Maintenance Support

- 1 This organization provides operating support to all Duke nuclear sites with an emphasis on generic  
1 programs and the promotion of consistency. Support is provided for the areas of Civil and Electrical  
1 Engineering, Mechanical and Instrument & Electrical (I&E) Maintenance, and Mechanical and  
1 Electrical Materials Procurement Engineering.

1 3. Safety Assurance

- 1 This organization provides oversight and support to assure safe nuclear station operation and  
1 compliance with regulatory requirements. Work Units include Nuclear Licensing Services, Operational  
1 Event Analysis Emergency Planning and QA Technical Services.

1 4. Operations, Performance, and Automation

- 1 This organization provides services and leadership which support, and supplement station personnel  
1 efforts as they relate to the operation of the station. Primary roles include support of long term  
1 development of new programs, policies and technology in the areas of reliability improvement, generic  
1 operating issues, system and component performance, and automation projects; as well as support for  
1 those the development of projects that are not feasible or economical endeavors for the individual  
1 station.

1 5. Nuclear Technical Services



- 1 This organization is responsible for providing oversight and technical support in the areas of  
1 chemistry, radiation protection, radwaste and radioactive materials control. It also determine, and  
1 maintain all dosimetry records for Duke Power personnel.

### 13.1.3 QUALIFICATIONS OF STATION PERSONNEL

- 1 The qualifications of personnel in the site organization are in accordance with Section 4 of the "Standard  
1 for Selection and Training of Nuclear Power Plant Personnel," ANSI N18.1-1971. Replacement  
1 personnel for positions in the stations are fully trained and qualified to fill their appointed positions.  
1 Qualifications of key site personnel are available for inspection onsite.

#### 13.1.3.1 Minimum Qualification Requirements

The minimum qualification requirements for station personnel are outlined in the succeeding paragraphs.

##### (a) Station Manager

The Station Manager shall have a minimum of ten years of responsible nuclear or fossil station experience, of which a minimum of three years shall be nuclear station experience. A maximum of four years of the remaining seven years of experience may be fulfilled by academic training on a one-for-one, time basis. To be acceptable, this academic training shall be in an engineering or scientific field generally associated with power production. The Station Manager shall have acquired the experience and training normally required for examination by the NRC for a Senior Reactor Operator license, whether or not the examination is taken.

##### 1 (b) Operations Superintendent

- 1 The Operations Superintendent shall have a minimum of eight years of responsible nuclear or fossil  
1 station experience, of which a minimum of three years shall be nuclear station experience. A maximum of  
1 two years of the remaining five years of experience may be fulfilled by academic training, or related  
1 technical training, on a one-for-one, time basis. The Operations Superintendent shall hold or have held a  
1 Senior Reactor Operator license.

##### 1 (c) Safety Assurance Manager

- 1 The Safety Assurance Manager should have a minimum of eight years of responsible nuclear or fossil  
1 station experience, of which a minimum of one year shall be nuclear station experience. A maximum of  
1 four years of the remaining seven years of experience should be fulfilled by satisfactory completion of  
1 academic training.

##### 1 (d) Work Control Superintendent

- 1 The Work Control Superintendent should have a minimum of eight years of responsible nuclear or fossil  
1 station experience, of which a minimum of one year shall be nuclear station experience. A maximum of  
1 four years of the remaining seven years of experience should be fulfilled by satisfactory completion of  
1 academic training.

##### 1 (e) Shift Operations Manager

- 1 The Shift Operations Manager shall have a minimum of a high school diploma or equivalent, and four  
1 years of responsible nuclear or fossil station experience, of which a minimum of one year shall be nuclear  
1 station experience. A maximum of two years of the remaining three years of experience may be fulfilled



- 1 by academic or related technical training on a one-for-one, time basis. A Shift Operations Manager shall hold a Senior Reactor Operator license.

- 1 **(f) Chemistry Manager**

The Chemistry Manager shall have a minimum of five years of experience in chemistry, of which a minimum of one year shall be in radiochemistry. A minimum of two years of this five years of experience should be fulfilled by academic or related technical training. A maximum of four years of this five years of experience may be fulfilled by academic or related technical training.

- 1 **(g) Radiation Protection Manager**

- 1 The Radiation Protection Manager shall have a minimum of five years of experience in radiation protection at a nuclear facility. A minimum of two years of this five years of experience should be related technical training. A maximum of four years of this five years of experience may be fulfilled by academic or related technical training.

- 1 **(h) Mechanical Superintendent**

- 1 A Mechanical Superintendent shall have a minimum of seven years of responsible nuclear or fossil station experience, or applicable industrial experience, of which a minimum of one year shall be nuclear station experience. A maximum of two years of the remaining six years of experience may be fulfilled by satisfactory completion of academic or related technical training on a one-for-one time basis. The Mechanical Superintendent should also have a non-destructive testing familiarity, craft knowledge, and an understanding of electrical, pressure vessel and piping codes.

- 1 **(i) Instrument and Electrical Superintendent**

- 1 The Instrument and Electrical Superintendent shall have a minimum of five years of experience in instrumentation and control of which a minimum of six months shall be in nuclear instrumentation and control. A minimum of two years of this five years of experience should be fulfilled by academic or related technical training. A maximum of four years of this five years of experience may be fulfilled by academic or related technical training.

- 1 **(j) Shift Supervisor**

- 1 A Shift Supervisor shall have the same qualifications as the Shift Operations Manager.

- 1 **(k) Assistant Shift Supervisor**

- 1 An Assistant Shift Supervisor shall have the same qualifications as a Shift Supervisor.

- 1 **(l) Operators**

Operators to be licensed by the NRC shall have a high school diploma, or equivalent, and two years of nuclear or fossil station experience, of which a minimum of one year shall be nuclear station experience. In order to be acceptable for full responsibility in a job, they shall hold an NRC Reactor Operator license.

Operators, whether or not they are to be licensed by the NRC, should have a high school diploma, or equivalent, and should possess a high degree of manual dexterity and mature judgment.

- 1 **(m) Technicians**

Technicians in responsible positions shall have a minimum of two years of experience in their specialty. These personnel should have a minimum of one year of related technical training in addition to their experience.

1 (n) Maintenance Personnel

Maintenance personnel in responsible positions shall have a minimum of three years of experience in one or more crafts. They should possess a high degree of manual dexterity and ability, and should be capable of learning and applying basic skills in maintenance operations.

1 (o) Shift Manager

- 1 A Shift Manager shall have a bachelor's degree or equivalent in a scientific or engineering discipline and two years of responsible nuclear power plant experience accompanied by an overall knowledge of the plant.

**13.1.3.2 Qualifications of Station Personnel**

Individuals who comprise the staff at McGuire Nuclear Station shall meet or exceed the qualification requirements specified in Section 13.1.3.1, "Minimum Qualification Requirements" on page 13-6.

#### 13.1.4 TABLES

Table 13-1. To Be Provided

13.1.5 FIGURES

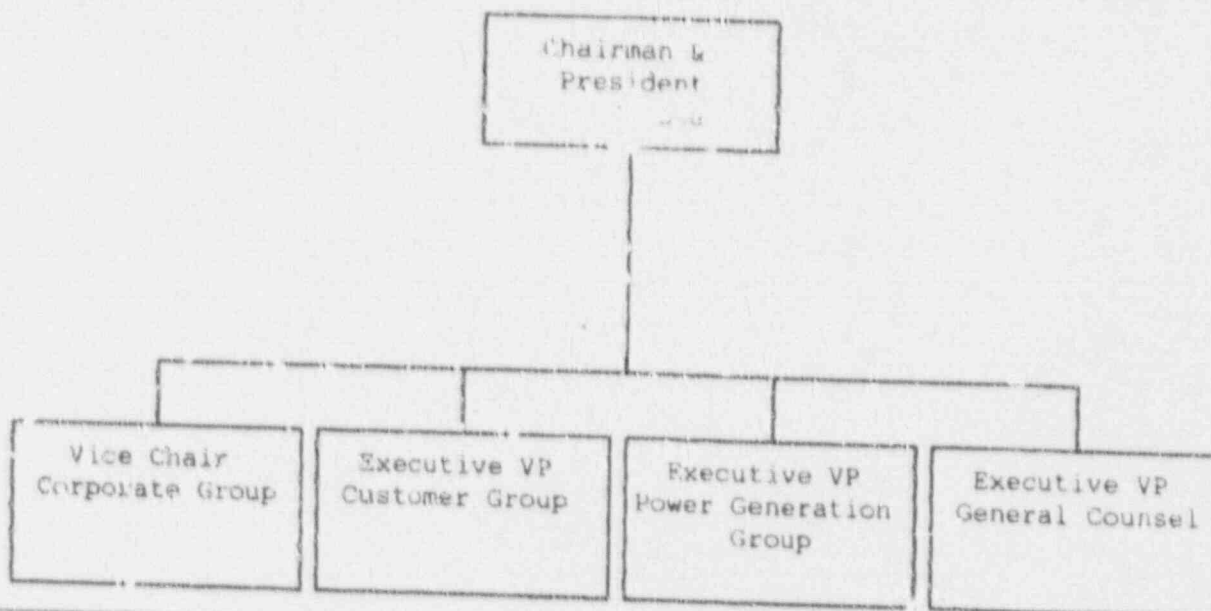


Figure 13-1.  
Corporate Organization

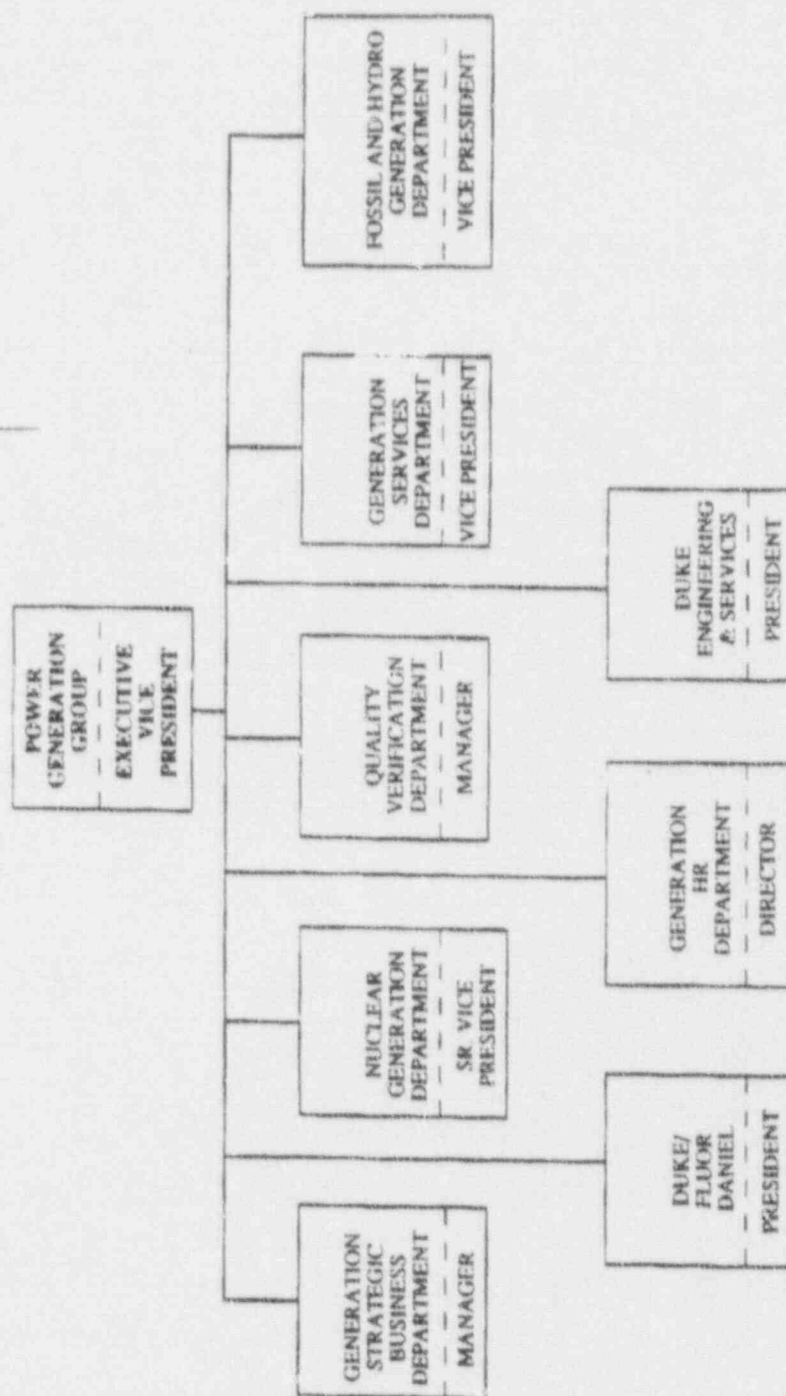


Figure 13-2.  
Power Generation Group Organization Chart



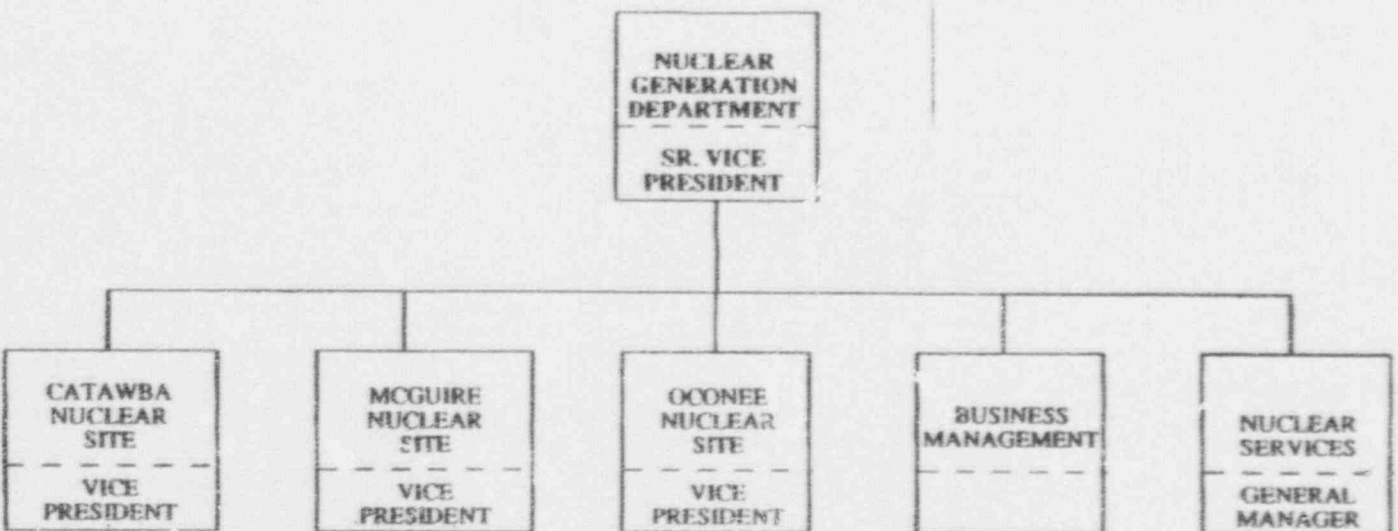


Figure 13-3.  
Nuclear Generation Department

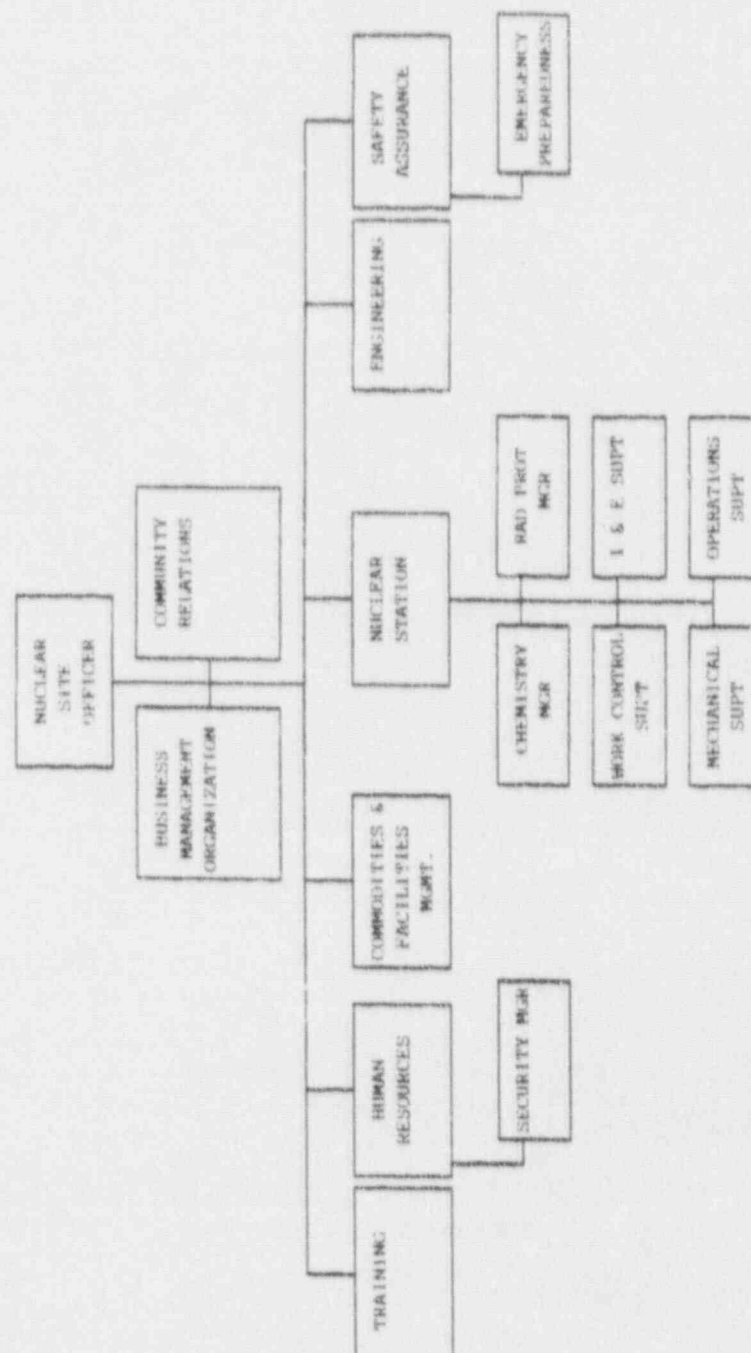


Figure 13-4.  
Typical Nuclear Site Organization

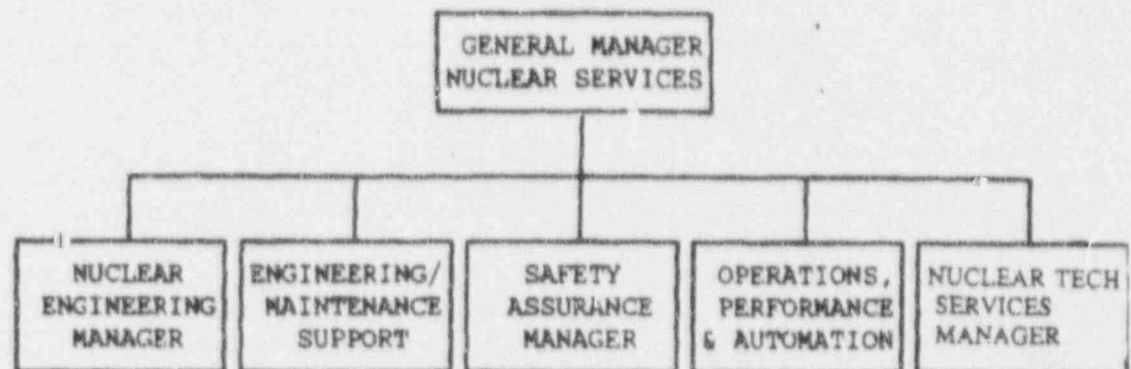


Figure 13-5.  
Nuclear Services Organization

Figure 13-6.  
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## 13.2 TRAINING

### 13.2.1 GENERAL PROGRAM DESCRIPTION

The principal objective of the Duke Power Company Employee Training and Qualifications System (ETQS) is to assure job proficiency of all station personnel involved in safety-related work through effective training and qualification. The system is designed to accommodate future growth and meet commitments to and comply with applicable established regulations and accreditation standards.

Qualification is indicated by successful completion of prescribed training, demonstration of the ability to perform assigned work or tasks competently and where required by regulation, maintaining a current and valid license issued by the agency establishing the requirements.

- 1 The Vice President, Generation Services Department, has overall responsibility for the administration of the Employee Training and Qualification System (ETQS). The Vice President, McGuire site, is responsible for the quality of work performed by individuals in the nuclear station. The Station Manager is responsible for the timely and effective development of assigned personnel.

Training is designed, developed and implemented according to a systematic approach to training. Employees are provided with formal training to establish the knowledge foundation and on-the-job training to develop work performance skills. Continuing training is provided, as required, to maintain proficiency in these knowledge and skill components, and to provide further employee development.

The Employee Training and Qualifications Program is designed to prepare initial and replacement station personnel for safe, reliable and efficient operation of the nuclear facility. The program is intended to meet or exceed INPO accreditation standards and regulatory requirements.

Appropriate training for personnel of various training and experience backgrounds is provided. The level at which an employee initially enters the training and qualification system for the particular area, is determined by an evaluation of the employee's past experience and level of ability.

#### 13.2.1.1 Regulatory Requirements

The applicable portions of the NRC regulations, regulatory guides, and reports listed below will be used in providing guidance in plant staffing and training.

- 10CFR PART 50 "Licensing of Production and Utilization Facilities"
- 10CFR PART 55 "Operators Licenses"
- 10CFR PART 19 "Notices, Instructions and Reports to Workers; Inspections"
- Regulatory Guide 1.8 "Qualification and Training for Nuclear Power Plants"
- NRC "Operator Licensing Guide," NUREG-0094, July 1976
- "Utility Staffing and Training for Nuclear Power," WASH-1130, USAEC Revised 1973
- NUREG-0654
- Regulatory Guide 8.2 "Guide for Administrative Practices in Radiation Monitoring"
- Regulatory Guide 8.8 "Information Relevant to Maintaining Occupational Radiation Exposures As Low As Reasonably Achievable (Nuclear Power Reactor)"
- Regulatory Guide 8.13, "Instructions Concerning Prenatal Radiation Exposure"
- NUREG-0737



the OJT/qualifications program for each technical area which is designed to supplement training received through formal classroom, laboratory, and/or simulator training. The objective of the program is to assure the trainee's ability to perform job tasks as described in the task descriptions and the Training and Qualification Guides.

#### 13.2.2.3 Continuing Training

Continuing Training is any training not provided as Initial Qualification and Basic Training which maintains and improves job-related knowledge and skills.

##### 13.2.2.3.1 Operator Requalification Training

The training is designed to maintain and demonstrate continued competence of all licensed operators. The training is described in the Duke Power Company - Employee Training and Qualifications System, Standard No. 2306.0 "Periodic Training Licensed Operator Requalification" dated effective March 1, 1987, as reviewed and approved by the Nuclear Regulatory Commission, January 28, 1987.

#### 13.2.2.3 Employee Development/Management Supervisory Training

Any training which falls outside of the scope of Technical Training and General Employee Training is considered to be Employee Development or Management/Supervisory Training.

Employee Development Management Supervisory Training may consist of various classes for different management personnel levels. An individual's training will depend on the position description and nomination by management.

### 13.2.3 OPERATOR LICENSE TRAINING

Duke Power Company's reactor operator and senior reactor operator training programs are based upon "a systems approach to training" as defined by 10CFR 55.4. These training programs were accredited by the Institute of Nuclear Power Operations and the National Nuclear Accrediting Board on May 30, 1985 (MNS). Certification of these training programs was made to the NRC in Mr. H.B. Tucker's letters dated May 18, 1987 and September 11, 1987.

The training for Reactor Operator and Senior Reactor Operator replacement is described in the Duke Power Company-Employee Training and Qualification System Standards No. 2303.0 "License Preparatory Reactor Operator Program" and No. 2304.0 "License Preparatory Senior Reactor Operator Program" dated effective March 1, 1987, as reviewed and approved by the Nuclear Regulatory Commission, January 28, 1987.

### 13.2.4 TRAINING PROGRAM EVALUATIONS

Training and qualifications activities are monitored by Production Training Services Personnel. The Quality Verification Department audits the station Employee Training and Qualification System. In addition, trainees and vendors may provide input concerning training program effectiveness. Methods utilized to obtain this information could be surveys, questionnaires, performance appraisals, staff evaluation, overall training program effectiveness evaluation instruments, etc. Frequently conducted classes are not evaluated each time. However, they are routinely evaluated at a frequency sufficient to determine program effectiveness by the ETQS Working Groups. Evaluation information may be collected through:

- verification of program objectives as related to job duties for which intended;

### 13.2.6 FIGURES

1  
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Figure 13-7.  
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## 13.4 REVIEW AND AUDIT

In matters of nuclear safety, both onsite and off-site review of station startup, operation, maintenance and technical matters is performed. Offsite review is performed by the Nuclear Safety Review Board (NSRB) whereas onsite review is performed by designated, qualified individuals. This review process commences at least six months prior to the initial operation of a station, so as to include preoperational testing and checkout of the station. Guidance in the development of the review program for test and operation is derived from: ANSI N18.7-1976, Administrative Controls for Nuclear Power Plants.

### 13.4.1 ON-SITE REVIEW

Qualified individuals from the station supervisory staff are assigned to review procedures, procedure changes, technical specification changes and plant modifications involving nuclear safety. These individuals are previously designated to perform these reviews. The final approval of the above reviews is by the Station Safety Assurance Manager. In addition, for each review conducted, a determination is made as to whether or not additional cross-disciplinary review is necessary. If concluded that it is necessary, the additional review would be performed by the appropriate designated station review personnel.

Other matters, such as incident investigation, performance of special reviews, review of the station security program and review of the station emergency plan are assigned to individuals or ad hoc groups from the operating organization.

### 13.4.2 INDEPENDENT REVIEW

#### 13.4.2.1 Off-Site Review

The Nuclear Safety Review Board (NSRB) is established to verify that the operation of a station is performed in a safe manner consistent with Company policy, approved operating procedures and license provisions; to review important proposed station modifications, tests and procedures; to verify that reportable occurrences are promptly investigated and corrected in a manner which reduces the probability of occurrence; and to detect trends which may not be apparent to a day-to-day observer. The Board reports its findings and recommendations to the Executive Vice President, Power Generation, and as required by Technical Specifications.

The membership of the NSRB collectively has the competence required to review problems in the following areas: Nuclear power station operations, nuclear engineering, chemistry, radiochemistry, metallurgy, instrumentation and control, radiological safety, mechanical engineering and electrical engineering. The NSRB is composed of no less than five persons, of whom no more than one is a member of the station organization. A quorum consists of five members and must include either the chairman or his designated alternate.

Formal meetings are held at least semi-annually. More frequent meetings are held if necessary.

Minutes of meetings are prepared and distributed to the Executive Vice President, Power Generation, and as required by Technical Specifications. The NSRB has the following general responsibilities:

1. Review safety evaluations for (1) changes to procedures, equipment or systems, and (2) tests or experiments completed under the provisions of 10CFR 50.59(a)(1) to verify that such actions did not constitute an unreviewed safety question.
2. Review proposed changes to procedures, equipment or systems which involve unreviewed safety question as defined in 10CFR 50.59.
3. Review tests or experiments which involve an unreviewed safety question as defined in 10CFR 50.59.
4. Review proposed changes in Technical Specifications or the Facility Operating Licenses.
5. Review violations of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance.
6. Review significant operating abnormalities or deviations from normal and expected performance of station equipment that affect nuclear safety.
7. Review incidents that are the subject of non-routine reports submitted to the Commission.
- 1 8. Review Quality Verification Department audits relating to station operations and actions taken in response to these audits.

Audits of station activities are performed under the cognizance of the NSRB. These audits encompass such items as:

1. The conformance of station operation to provisions contained within the Technical Specifications and applicable facility operating license conditions.
2. The performance, training and qualifications of the station staff.
3. The results of actions taken to correct deficiencies occurring in equipment, structures, systems or methods of operation that affect nuclear safety.
4. The performance of activities required by the quality assurance program to meet the criteria of Appendix B to 10CFR 50.
5. The station emergency plan and implementing procedures.
6. The station security plan and implementing procedures.



The annunciator response procedures are grouped by panels, then subdivided by annunciator names so that the response procedure for an annunciator may be quickly located.

### **13.5.1.2 Procedures Performed by Non-Licensed Personnel**

#### **13.5.1.2.1 Maintenance Procedures**

Maintenance of station safety-related structures, systems and components is performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances (for example, skills normally possessed by qualified maintenance personnel may not require detailed step-by-step delineation in a written procedure) which conform to applicable codes, standards, specifications, criteria, etc. Where appropriate sections of related vendor manuals, instructions or approved drawings with acceptable tolerances do not provide adequate guidance to assure the required quality of work, an approved, written maintenance procedure is provided.

Each procedure is sufficiently detailed that qualified workers can perform the required functions without direct supervision. Written procedures, however, cannot address all contingencies and maintenance procedures, therefore, contain a degree of flexibility appropriate to the activities for which each is applicable.

- 1 The station's Mechanical section, under the Mechanical Superintendent, has responsibility for preparation and implementation of maintenance procedures related to electrical and mechanical equipment.

#### **13.5.1.2.2 Instrument Procedures**

Maintenance, testing, and calibration of station safety-related instruments is performed in accordance with written, approved procedures.

Each procedure is sufficiently detailed that qualified workers can perform the required functions without direct supervision. Written procedures, however, cannot address all contingencies and therefore contain a degree of flexibility appropriate to the activities for which each is applicable.

- 1 The station's Instrument and Electrical section, under the Instrument and Electrical Superintendent, has responsibility for preparation and implementation of instrument procedures.

#### **13.5.1.2.3 Periodic Test Procedures**

Testing conducted on a periodic basis to determine various station parameters and to verify the continuing capability of safety-related structures, systems and components to meet performance requirements is conducted in accordance with approved, written procedures. Periodic tests procedures are utilized to perform such testing and are sufficiently detailed that qualified personnel can perform the required function without direct supervision.

- 1 Periodic test procedures are performed by the station's Chemistry, RP, Operations, Mechanical, and IAE groups.

#### **13.5.1.2.4 Chemistry Procedures**

Chemical and radiochemical activities associated with station safety-related structures, systems, and components are performed in accordance with approved, written procedures and the station chemistry manual.



Each procedure is sufficiently detailed that qualified workers can perform the required functions without direct supervision. Written procedures, however, cannot address all contingencies and therefore contain a degree of flexibility appropriate to the activities for which each is applicable.

The station's chemistry section has responsibility for preparation and implementation of chemistry procedures.

#### 1 13.5.1.2.5 Radiation Protection Procedures

Information concerning these procedures is presented in Sections 12.1.5, "Operating Procedures" on page 12-8 and 12.2.5, "Operating Procedures" on page 12-47.

#### 13.5.1.2.6 Plant Security Procedures

Information concerning these procedures is presented in the Station Security Plan.

#### 13.5.1.2.7 Radioactive Waste Management Procedures

Information concerning these procedures is presented in Sections 11.2.4, "Operating Procedures" on page 11.2.4, 11.3.4, "Operating Procedures" on page 11.3.4, and 11.5.3, "System Design and Operation" on page 11.5.3.

#### 13.5.1.2.8 Emergency Preparedness Procedures

Information concerning these procedures is presented in Section 13.3, "Emergency Planning" on page 13-22.

#### 13.5.1.2.9 Materials and Control Procedures

1 Information concerning these procedures is presented in Duke Power Company Topical Report, Quality Assurance Program, DUKE-1.

#### 13.5.1.2.10 Calibration Procedures

1 Information concerning these procedures is presented in Duke Power Company Topical Report, Quality Assurance Program, DUKE-1.

### 13.5.1.3 Administrative Controls

Station administrative procedures are written in order to administratively control all station testing, maintenance, and operating activities. Listed below are several areas for which administrative procedures are written, including principle features:

1. The reactor operator's authority and responsibility: The reactor operator is given the authority to manipulate controls which directly or indirectly affect core reactivity, including a reactor trip if he deems necessary. He is also assigned the responsibility for knowing the limits and setpoints associated with safety-related equipment and systems as specified in the Technical Specifications and design basis in the operating procedures.
2. The senior reactor operator's authority and responsibility: The senior reactor operator, in addition to the authorities and responsibilities described for the reactor operator, is given the authority to direct the licensed activities of the reactor operator and ultimately is held responsible for all licensed activities at the station within his control.

- activities affecting station operation or operating indication. All station personnel performing functions which may affect unit operation or Control Room indications are required to notify the Control Operator (licensed Reactor Operator) prior to initiating such action. Removal of an instrument or component from service requires the permission of the Shift Supervisor or Assistant Shift Supervisor (licensed Senior Reactor Operators).
4. Manipulation of facility controls: No one is permitted to manipulate the facility controls who is not a licensed reactor operator or senior reactor operator, except for license trainees operating under the direction of a licensed operator. The licensed operators are required to comply with the requalification program as described in Section 13.2.2, "Program Content Description" on page 13-17.
  5. Responsibility for licensed activities: Responsibility for directing the licensed activities of licensed operators is assigned to individuals with senior reactor operator licenses by virtue of their position within the station organization.
  6. Equipment control: Equipment control is maintained and documented through the use of safety tags and equipment delineating tags.
  7. Master surveillance testing schedule: This procedure establishes a master surveillance testing schedule to insure that all safety-related testing is performed and evaluated on a timely basis. Surveillance testing is scheduled such that the safety of the station is not dependent on the performance of a structure, system or component which has not been tested within its specified testing interval. The master surveillance testing schedule identifies surveillance and testing requirements, applicable procedures, and required test frequency. Assignment of responsibility for these requirements is also indicated.

A station Directive is written which requires a reactor operator or senior reactor operator to be present at the controls at all times during the operation of the facility. The area designated "at the controls" is defined by Figure 13-8 on page 13-35.

Administrative or special orders of a transient or self-canceling nature are issued (and rescinded if necessary) by the use of intrastation memoranda.

The administrative control of maintenance is maintained as follows:

1. In order to assure safe, reliable, and efficient operation, a comprehensive maintenance program for the station's safety-related structures, systems and components is established.
  2. The Mechanical Superintendent is responsible for directing the performance of station maintenance activities affecting electrical and mechanical equipment. The Instrument and Electrical Superintendent is responsible for directing the performance of station maintenance activities affecting instrumentation.
  3. Personnel performing maintenance activities are qualified in accordance with applicable codes and standards, as appropriate.
  4. Maintenance is performed in accordance with written procedures which conform to applicable codes, standards, specifications, criteria, etc.
  5. Maintenance is scheduled so as not to jeopardize station operation or the safety of a reactor or reactors.
  6. Maintenance histories are maintained on station safety-related electrical equipment, mechanical equipment, and instrumentation.
- The administrative control of modification is discussed in Topical Report, DUKE-1, Quality Assurance Program.

## 13.5.2 ADMINISTRATION OF STATION PROCEDURES

### 13.5.2.1 Preparation of Procedures

- Each procedure is assigned to a member of the station staff for development. Initial procedure drafts are reviewed by members of the station staff; the Nuclear Generation Department General Office, and other departments within Duke; and by personnel from Westinghouse and other vendors, as appropriate. Following resolution of review comments, a revised procedure is prepared and forwarded to a previously designated qualified reviewer for review and comment. This qualified reviewer also makes the determination whether or not any additional, cross-disciplinary review is required. After all required and appropriate reviews have been completed a final version of a procedure is prepared. Upon approval by the Responsible implementing Manager as previously designated, a procedure becomes available for use. Additional discussion of procedure preparational control is contained in Topical Report, DUKE-1, Quality Assurance Program.

### 13.5.2.2 Changes to Procedures

Minor changes to an approved procedure, without prior approval of the appropriate supervisory personnel are permitted only to the extent that such changes correct errors in the applicable approved procedure of a typographical or editorial nature.

Major changes to an approved procedure undergo the same review and approval process as procedures.

### 13.5.2.3 Development and Maintenance of Emergency Procedures

- The administrative control of emergency procedures (EPs) differs from that of other station procedures. The process is described in detail in References 1-4 on page 13-33. Briefly, an EP draft is developed from the corresponding Emergency Procedure Guideline (EPG) by a member of the station Operations group. This draft is reviewed by the Nuclear Engineering section of the Nuclear Services Group to ensure that the technical guidance contained therein agrees with the EPG. Other members of the station Operations group review the draft for the written correctness of specific information, e.g., valve tag numbers and equipment locations, and for adherence to the station Emergency Procedure Writers Guide (contained in References 1-4 on page 13-33). Revisions to the draft are made, if necessary, and a technical verification certificate is issued by the Nuclear Engineering section for the revised EP. Prior to final approval the EP is validated according to the program described in References 1-4 on page 13-33. This validation is to ensure that the EP as written is executable by the operator. Validation is performed on the McGuire Nuclear Station plant simulator or with another of the methods described in References 1-4 on page 13-33. From this point the EP goes to the qualified reviewer and the approval process proceeds as for operating procedures. Changes to EPs follow the same process of written correctness review by the Operations group and human factors review against the Writers Guide. If the changes is also a change to the EPG, the technical review against the corresponding EPG is repeated. For changes which might affect executability of the EP, the validation process is repeated.

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## **13.6 STATION RECORDS**

McGuire station records are maintained in a controlled and systematic manner in order to adequately document station operation. This maintenance is in accordance with the intent of the following:

1. Title 10, Code of Federal Regulations, Part 50, Appendix B, Criterion XVII;
2. Title 18, Code of Federal Regulations, Part 125, Section 125.3, Section 22.2.

### **13.6.1 STATION RECORDS ADMINISTRATION**

The McGuire Station Manager has the final responsibility for the proper management of station records. The various station supervisors are responsible to the station Manager for assuring the proper management, as applicable, of records within their purview.

Station records are maintained in an identifiable and retrievable manner in the station Master File. Access to, and use of, the Master File is controlled.

### **13.6.2 STATION RECORDS REQUIREMENTS**

#### **13.6.2.1 Administrative Records**

##### **13.6.2.1.1 Reportable Occurrences**

Records of reportable occurrences are retained for a minimum of six (6) years.

##### **13.6.2.1.2 Nuclear Safety Review Board**

Minutes of meetings of the Nuclear Safety Review Board applicable to McGuire Nuclear Station are retained for a minimum of six (6) years.

#### **13.6.2.2 Environmental Records**

Records of off-site environmental surveys are retained for the life of the station.

#### **13.6.2.3 Maintenance Records**

##### **13.6.2.3.1 Modifications**

Records of modifications to the station as described in the FSAR are retained for the life of the station.

##### **13.6.2.3.2 Maintenance Histories**

Maintenance histories are maintained on station safety-related structures, systems and components. These histories contain a description of maintenance performed and sufficient documentation to assure identification of any replacement parts used. These records are retained for a minimum of six (6) years.

**13.6.2.3.3 Inspections**

Safety-related inspections, such as equipment inservice inspections, cleanliness inspections and procedure compliance inspections, are documented in such a manner as to allow identification of the individual(s) performing the inspection, when the inspection was performed, the type and purpose of the inspection, and the results of the inspection. These records are retained for a minimum of six (6) years.

**13.6.2.4 Operating Records****13.6.2.4.1 Changes to Operating Procedures**

Records of changes to safety-related operating procedures are retained for the life of the station.

**13.6.2.4.2 Switchboard Record**

The Switchboard Record contains data on station and unit electrical power loadings and generation, generator temperatures, bus voltages and transmission line voltages, and is retained for a minimum of six (6) years.

**13.6.2.4.3 Reactor Operations Logbook**

The Reactor Operations Logbook is maintained for each unit at the station. The logbook contains information concerning changes in reactivity. Notations are made of any abnormal conditions of operation due to auxiliary equipment and of releases of radioactive waste, both gaseous and liquid. Alarms received are normally logged by computer, however, those pertaining to reactor core conditions are also listed in this log with appropriate explanation. The Reactor Operations Logbook is retained for a minimum of six (6) years.

**13.6.2.4.4 Shift Supervisor Logbook**

The Shift Supervisor Logbook contains a summary of station operation for each shift. Significant abnormalities which occur are explained in greater detail than would be expected in the Reactor Operations Logbook. The Shift Supervisor Logbook is retained for a minimum of six (6) years.

**13.6.2.5 Radiological Records****13.6.2.5.1 Personnel Radiation Exposure**

Personnel radiation exposure records, including an individual's past radiation exposure history and current radiation exposure, for the appropriate personnel as required by 10CFR 20, are retained for the life of the station.

**13.6.2.5.2 Radiation Monitoring**

Radiation monitoring records, including records of radiation and contamination surveys identifiable as to location(s) and date(s), are retained for the life of the station.

**13.6.2.5.3 Radioactive Releases**

Records of radioactive releases and waste disposal are retained for the life of the station.

**13.6.2.6 Special Nuclear Material Records**



**13.6.2.6.1 Physical Inventory**

Position maps, photographs, television tapes or other suitable devices showing the location and identification of each fuel assembly are maintained for each fuel storage area. These records are updated at the completion of each major fuel handling operation. Also, a record is maintained of the storage location history of each fuel assembly from the time it is received at the station until it is shipped off site. Special nuclear material physical inventory records are maintained for the life of the station.

**13.6.2.6.2 Isotopic Inventory**

Records are kept which show the isotopic content of each fuel assembly as follows:

1. When received.
2. Semi-annually while being irradiated in a reactor.
3. At the time of shutdown prior to each refueling outage.
4. At the time the fuel assembly is shipped off site.

Isotopic inventory records are retained for the life of the station.

**13.6.2.7 Testing Records****13.6.2.7.1 Preoperational Testing**

Safety-related preoperational testing records are retained in sufficient detail to permit adequate confirmation of the testing program. In particular, these records identify the data taker(s), the results of the testing and whether or not the results were acceptable, discrepancies and their cause, and any corrective action resulting from the test. Preoperational testing records are retained for the life of the station.

**13.6.2.7.2 Special Testing**

Records of special reactor tests or experiments are retained for the life of the station.

**13.6.2.7.3 Periodic Testing**

Safety-related periodic testing records are retained in sufficient detail to permit adequate confirmation of the testing program. In particular these records identify the data taker(s), the results of the testing and whether or not the results were acceptable, discrepancies and their cause, and any corrective action resulting from the test. Also, records of other periodic checks, calibrations, etc., performed in accordance with surveillance requirements for safety-related parameters, structures, systems and components are retained. Periodic testing and surveillance records are retained a minimum of six (6) years.

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## 13.7 NUCLEAR SECURITY

A separate Physical Security Plan is submitted for the protection of each nuclear station against potential acts of radiological sabotage or theft of special nuclear material. This information is to be withheld from public disclosure pursuant to 10CFR 73.21. The Physical Security Plan encompasses the physical security organization, selection and training of personnel for security purposes, communications systems for security, provisions for monitoring the status of vital equipment, access controls to the station including physical barriers and means of detecting unauthorized intrusions, and arrangements with law enforcement authorities for assistance in responding to any security threat.

This Physical Security Plan conforms to the requirements of 10CFR 50.34 (c) and 10CFR 73.55.