DUKE POWER COMPANY P.O. BOX 33189

P.O. BOX 33189 CHARLOTTE, N.C. 28242

HAL B, TUCKER VICE PRESIDENT NUCLEAR PRODUCTION

September 29, 1982

TELEPHONE (704) 373-4531

Mr. Harold R. Denton, Director Office of Nuclear Reactor Regulation U. S. Nuclear Regulatory Commission Washington, D. C. 20555

Attention: Ms. E. G. Adensam, Chief Licensing Branch No. 4

Re: Catawba Nuclear Station
Docket Nos. 50-413 and 50-414

Dear Mr. Denton:

Mr. A. C. Thies's letter of July 29, 1982 notified the NRC of the reorganization of Duke's Steam Production Department, effective August 1, 1982. The attached revised Catawba FSAR pages reflect the organizational changes and other miscellaneous changes to Chapter 13. These pages will be included in Revision 7 to the FSAR.

Very truly yours,

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Hal B. Tucker

ROS/php Attachment

Cc: Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Mr. Frank Jape U. S. Nuclear Regulatory Commission Region II 101 Marietta Street, Suite 3100 Atlanta, Georgia 30303

Mr. P. K. Van Doorn NRC Resident Inspector Catawba Nuclear Station

Mr. Robert Guild, Esq. Attorney-at-Law 314 Pall Mall Columbia, South Carolina 29201 8001

Mr. Harold R. Denton, Director September 29, 1982 Page 2

cc: Palmetto Alliance 2135½ Devine Street Columbia, South Carolina 29205

> Mr. Jesse L. Riley Carolina Environmental Study Group 854 Henley Place Charlotte, North Carolina 28207

Mr. Henry A. Presler, Chairman Charlotte-Mecklenburg Environmental Coalition 943 Henley Place Charlotte, North Carolina 28207 The Vice President, Design Engineering has overall responsibility for the design of nuclear generating stations, and, at all times, one of the Chief Engineers has project management responsibility. This responsibility is transferred from the Civil-Environmental Division, to the Mechanical-Nuclear Division and then to the Electrical Division as the job progresses. The organizational structure of the Design Engineering Department is shown in Figure 13.1.1-2.

The Construction Department has the responsibility for all site construction activities. The department is organized by projects and each nuclear station has a separate project group. The Construction Department is responsible for certain field testing (e.g., preoperational hydrostatic testing).

# 13.1.1.3 Station Support Organization

The Nuclear Production Department is responsible for operation and maintenance of nuclear stations. This department provides general supervision and technical management services for the nuclear stations. The Nuclear Production organization is shown in Figure 13.1.1-3. The educational background and experience of key personnel is given in Table 13.1.1-1.

Personnel within the Nuclear Production Department have considerable nuclear experience from work associated with the Oconee and McGuire Nuclear Stations.

The General Manager - Nuclear Stations is responsible for operating and maintaining nuclear generation facilities in a safe, economical, and reliable manner to meet Company and regulatory requirements.

The Nuclear General Services Group reports to the General Manager - Nuclear Stations. This group has responsibility for security and fire protection.

The Nuclear Operation Group is responsible for providing support to the nuclear stations for startup coordination (preoperational units) and operation and outage coordination (operational units).

The Nuclear Maintenance Group is responsible for providing support to the nuclear stations for major maintenance, materials management, and other maintenance functions requiring specialized services including mechanical, metallurgical, and instrumentation/electrical engineering. The Nuclear Maintenance Group is also responsible for coordination of nuclear station modifications.

The Nuclear Engineering Group is responsible for licensing, safety analysis and fuel management activities. Included in these activities are special nuclear materials accountability and core performance.

The Nuclear Technical Services Group is responsible for providing environmental, chemical, health physics, radwaste and performance support services for new and operating nuclear generating facilities.

The Production Support Department provides additional support for the nuclear stations in the areas of computers, instrumentation and control, training and maintenance support. The Production Support Department organization is shown in Figure 13.1.1-4.

Other departments within the Company are available for consultation and assistance as required. The Design Engineering Department is available to furnish nuclear, mechanical, structural, electrical, thermohydraulic and metallurgy and materials engineering. Other departments which regularly supply assistance and services for the station are the Transmission Department and the Construction Department.

### 13.1.2 OPERATING ORGANIZATION

# 13.1.2.1 Station Organization

The organization of each nuclear station staff generally follows the pattern already proven to be successful in Duke's conventional steam stations and in the Oconee and McGuire Nuclear Stations. The underlying philosophy is that the station staff is to be fully capable and equipped to handle all situations involving safety of the station and public.

The nuclear station staff for one and two units is shown in Figures 13.1.2-1, and -2. Positions shown are functional and may not correspond to actual titles. The Catawba Nuclear Station is staffed at sufficient levels prior to operation to allow for training, procedure development, and other pre-operational activities.

# 13.1.2.2 Personnel Functions, Responsibilities and Authorities

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

# (a) Station Manager

The station Manager reports to the Manager, Nuclear Production 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. The station Manager or his designee has the authority to approve and issue Station Directives and procedures.

# (b) Superintendent of Administration

The Superintendent of Administration is responsible for coordination of station administrative functions including clerical, document control, safety, fire protection, training and security. In the event of the absence of the station Manager, the Superintendent of Administration, if so designated, assumes the responsibilities and authority of the station Manager.

# (c) Superintendent of Operations

The Superintendent of Operations 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 Superintendent of Operations, if so designated, assumes the responsibilities and authority of the station Manager.

# (d) Operating Engineer

The Operating Engineer has responsibility for directing the actual day-to-day operation of the unit to which he is assigned and may assume complete responsibility for station operation in the absence of the Superintendent of Operations.

## (e) 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.

#### (f) 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.

## (g) Reactor Operator

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

# (h) Nuclear Equipment Operator

A Nuclear Equipment Operator is responsible for the operation of equipment outside of the Control Room.

# (i) Superintendent of Technical Services

The Superintendent of Technical Services is responsible for directing the activities of the Technical Services Group, which includes performance, chemistry and health physics. In the event of absence of the station Manager, the Superintendent of Technical Services, if so designated, assumes the responsibilities and authority of the station Manager.

# (j) Performance Engineer

The Performance Engineer directs data gathering and evaluation in the areas of equipment and station performance. Specifically included in this are core physics and core performance, from both nuclear and thermal-hydraulic considerations. He assists in setting up fuel shuffling patterns and participates in other phases of fuel management.

# (r) Senior Station Quality Assurance Engineer

The functions, responsibilities and authorities of the Senior Station Quality Assurance Engineer are described in Topical Report, DUKE-1A.

# 13.1.2.3 Shift Crew Composition

The operating shift crew consists of a Shift Supervisor, an Assistant Shift Supervisor for each unit, and appropriate licensed and unlicensed operators. In addition, a health physics technician is on site at all times when there is fuel in a reactor and a rad/chem technician is onsite at all times when a unit is being operated in Modes 1-4.

# 13.1.3 QUALIFICATIONS OF STATION PERSONNEL

The qualifications of personnel in the operating staff are in accordance with Section 4 of ANSI N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel", and are in accordance with Regulatory Guide 1.8 (Rev. 1) with the exception of those for the Radiation Protection Manager in Part C of Regulatory Guide 1.8.

The RPM (Station Health Physicist) shall have a bachelor's degree in a science or engineering subject or the equivalent in experience, including some formal training in radiation protection, and shall have at least five years of professional experience in applied radiation protection of which three years shall be in applied radiation protection work in one of Duke Power Company's nuclear stations. A qualified individual who does not meet the above requirements, but who has demonstrated the required radiation protection management capabilities and has professional experience in applied radiation protection work at one of Duke Power Company's multi-unit nuclear stations, may be appointed to the position of Station Health Physicist by the station Manager, based on the recommendations of the System Health Physicist and as approved by the Manager, Nuclear Production.

An individual who temporarily replaces the RPM shall have a bachelor's degree in a science or engineering subject or the equivalent in experience and shall have at least two years experience, one of which shall be nuclear power plant experience. Six months experience shall be on site.

Replacement personnel for positions at the station are fully trained and qualified to fill their appointed positions.

### (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.

# (b) Superintendent of Operations

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

### (c) Superintendent of Technical Services

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

#### (d) Superintendent of Maintenance

The Superintendent of Maintenance 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 Superintendent of Maintenance should also have non-destructive testing familiarity, craft knowledge, and an understanding of electrical, pressure vessel and piping codes.

#### (e) Operating Engineer

An Operating Engineer shall have a minimum of a high school diploma, or equivalent, and four years of responsible nuclear or fossil station experience, of which a minimum of one year shall be nuclear station experience. A maximum of two years of the remaining three years of experience may be fulfilled by academic or related technical training on a one-for-one, time basis. An Operating Engineer shall hold a Senior Reactor Operator license.

# TABLE 13.1.1-1 (Page 1)

### QUALIFICATIONS OF KEY PERSONNEL

NAME: H. B. Tucker

POSITION: Vice President, Nuclear Production

#### EDUCATION:

1949 B. S. Electrical Engineering Georgia Institute of Technology

## EXPERIENCE:

Duke Power Company

Various steam station assignments (1949-62)
Superintendent, Riverbend Steam Station (1962-67)
System Production Engineer (1967-71)
Manager, Operation and Maintenance (1971-74)
Manager, Nuclear Production Division (1974-82)
Vice President, Nuclear Production (1982-Present)

#### TABLE 13.1.1-1 (Page 2)

#### QUALIFICATIONS OF KEY PERSONNEL

NAME: E. L. Thomas

POSITION: Manager, Nuclear Reliability Assurance

#### EDUCATION:

1947 B. S. Mechanical Engineering Clemson University

### EXPERIENCE:

Duke Power Company

Various steam station assignments (1947-61)
Assistant Superintendent Riverbend Station (1961-1963)
Superintendent, Marshall Steam Station (1963-71)
Manager, Employee Development (1971-75)
Manager, Training Services (1975-82)
Manager, Nuclear Reliability Assurance (1982-Present)

# TABLE 13.1.1-1 (Page 3)

## QUALIFICATIONS OF KEY PERSONNEL

NAME: R. C. Futrell

POSITION: Manager, Nuclear Safety Assurance

#### EDUCATION:

1965 B. A. Math/Physics Old Dominion College

#### EXPERIENCE:

Newport News Shipbuilding and Dry Dock Company

Radiological Control Monitor, Planner and Engineer (1960-73)

Duke Power Company

Health Physicist (1973-80) Director, Nuclear Safety Review Board (1980-82) Manager, Nuclear Safety Assurance (1982-Present)

### TABLE 13.1.1-1 (Page 4)

## QUALIFICATIONS OF KEY PERSONNEL

NAME: P. H. Barton

POSITION: Manager, Nuclear Operation

#### EDUCATION:

1948 B. S. Mechanical Engineering Clemson University

1961 Reactor Operation Supervisory Program
Oak Ridge School of Reactor Technology

#### CERTIFICATION/LICENSES:

Registered Professional Engineer in North and South Carolina Senior Operator License for Carolina-Virginia Tube Reactor

# EXPERIENCE:

Duke Power

Various steam station and general office staff assignments (1948-60) CVNPA (1960-64)
Project Engineer (1964-1968)
Manager, Technical and Nuclear Services (1968-74)
Manager, System Operation and Maintenance (1974-82)
Manager, Nuclear Operation (1982-Present)

### TABLE 13.1.1-1 (Page 5)

# QUALIFICATIONS OF KEY PERSONNEL

NAME: G. W. Hallman

POSITION: Manager, Nuclear Maintenance

## EDUCATION:

1960 B.S. Mechanical Engineering N.C. State University

# EXPERIENCE:

Babcock & Wilcox Company

Engineer - Fossil Fired Steam Generators (1960-66)

Celanese Corporation

Maintenance Engineer (1966-72)

Duke Power

Maintenance Engineer (1972-78)
Superintendent of Maintenance, Catawba Nuclear Station (1978-82)
Manager, Nuclear Maintenance (1982-Present)

### TABLE 13.1.1-1 (Page 6)

### QUALIFICATIONS OF KEY PERSONNEL

NAME: G. E. Vaughn

POSITION: General Manager, Nuclear Stations

#### EDUCATION:

1965 B.S. Electrical Engineering University of South Carolina

#### CERTIFICATION/LICENSE:

SRO License - Oconee Nuclear Station

## EXPERIENCE:

Duke Power Company

Junior Engineer, Marshall Steam Station (1965-66)
System Computer Engineer (1966-72)
Station Manager, Dan River Steam Station (1972-74)
Manager of Administrative Services, Steam Production Department (1974-77)
Assistant to Senior Vice President - Production and Transmission (1977-79)
Assistant Station Manager, Oconee Nuclear Station (1979-82)
General Manager, Nuclear Stations (1982-Present)

# TABLE 13.1.1-1 (Page 7)

# QUALIFICATIONS OF KEY PERSONNEL

NAME: B. F. Caldwell

POSITION: Manager, Nuclear General Services

#### EDUCATION:

1970 B. S. Mechanical Engineering University of North Carolina Charlotte

# EXPERIENCE:

Duke Power Company

Various steam station assignments (1970-73)
Assistant Training Engineer (1973-74)
Training Requirements Engineer (1974-78)
Manager, Safety and General Training (1978-1982)
Manager, Nuclear General Services (1982-Present)

# TABLE 13.1.1-1 (Page 8)

# QUALIFICATIONS OF KEY PERSONNEL

NAME: W. A. Haller

POSITION: Manager, Nuclear Technical Services

#### EDUCATION:

1960 B. S. Chemistry LaSalle College

1963 M. S. Nuclear Chemistry University of Notre Dame

1971 Ph.D. Nuclear Chemistry Washington State University

# EXPERIENCE:

General Electric Company

Staff Chemist (1963-65)

Battelle Northwest

Staff Chemist (1965-71)

Babcock & Wilcox Company

Manager - Chemistry and Health Physics (1971-73)

Duke Power Company

Manager, Chemical and Environmental Services (1974) Manager, Technical and Environmental Services (1974-1982) Manager, Nuclear Technical Services (1982-Present)

# TABLE 13.1.1-1 (Page 9)

# QUALIFICATIONS OF KEY PERSONNEL

NAME: Lionel Lewis

POSITION: System Health Physicist

#### EDUCATION:

1949 P. A. Pre-medical Sciences University of Vermont

1955 M. S. Radiological Biophysics University of Rochester

### CERTIFICATION/LICENSES:

Certified in Health Physics by the American Board of Health Physics (1961)

# EXPERIENCE:

Brookhaven National Laboratory

Jr. Health Physicist (1953-55)

The Martin Co.

Assistant Supervisor of Health Physics (1955-57)

Combustion Engineering, Inc.

Supervisor of Health Physics, Safety and Industrial Hygiene (1957-60)

Carolinas-Virginia Nuclear Power Associates (CVTR)

Health Physicist and Safety Coordinator (1961-67)
Plant Superintendent (1963-64)

Duke Power Company

Staff Health Physicist (1967-71) System Health Physicist (1971-Present)

### TABLE 13.1.1-1 (Page 10)

### QUALIFICATIONS OF KEY PERSONNEL

NAME: M. L. Birch

POSITION: System Engineer, Radwaste Engineering

### EDUCATION:

1968 B. S. Chemistry University of Wisconsin

1974 M. S. Radiological Sciences (Physics) University of Wisconsin

# CERTIFICATION/LICENSES:

Registered Professional Engineer in North Carolina Certified Health Physicist

## EXPERIENCE:

State of Wisconsin

Radiation Protection Section (1968-72)

Duke Power Company

Various assignments in the Steam Production Department Health Physics Unit (1972-82) System Engineer, Radwaste Engineering (1982-Present)

# TABLE 13.1.1-1 (Page 11)

# QUALIFICATIONS OF KEY PERSONNEL

NAME: R. W. Eaker

POSITION: System Nuclear Chemist

# EDUCATION:

1967 B. S. Chemistry
N. C. State University

1974 PhD Nuclear and Inorganic Chemistry Florida State University

# EXPERIENCE:

University of Puerto Rico (1974-75)

(Postgraduate work in oceangraphy)

Duke Power Company

Various assignments in Steam Production Department, Power Chemistry Group (1975-82) System Nuclear Chemist (1982-Present)

# TABLE 13.1.1-1 (Page 12)

### QUALIFICATIONS OF KEY PERSONNEL

NAME: K. S. Canady

POSITION: Manager, Nuclear Engineering Services

# EDUCATION:

1963 B. S. Nuclear Engineering North Carolina State University

# EXPERIENCE:

Lockheed - Georgia Corporation

Associate Engineer (1963-65)

Research Triangle Institute

Project Manager (1965-68)

Duke Power Company

Assistant Test Engineer (1968-71)
Nuclear Engineer (1972-72)
System Nuclear Engineer (1972-74)
Manager, Project Coordination and Licensing (1974-82)
Manager, Nuclear Engineering Services (1982-Present)

## TABLE 13.1.1-1 (Page 13)

## QUALIFICATIONS OF KEY PERSONNEL

NAME: P. M. Abraham

POSITION: System Engineer, Reactor Safety

#### EDUCATION:

1963 B. S. Physics St. Thomas College

1965 M. S. Physics Union Christian College

1970 PhD Nuclear Physics University of Colorado

1974 M.S. Nuclear Engineering North Carolina State University

#### **EXPERIENCE:**

St. Thomas College

Lecteror in Physics (1965-66)

Belmont-Abbey College

Assistant Professor (1970-72)

Duke Power Company

Safety Analysis Engineer (1974-80) System Engineer, Reactor Safety (1980-Present)

# TABLE 13.1.1-1 (Page 14)

# QUALIFICATIONS OF KEY PERSONNEL

NAME: H. T. Snead

POSITION: Manager, Nuclear Fuel Services

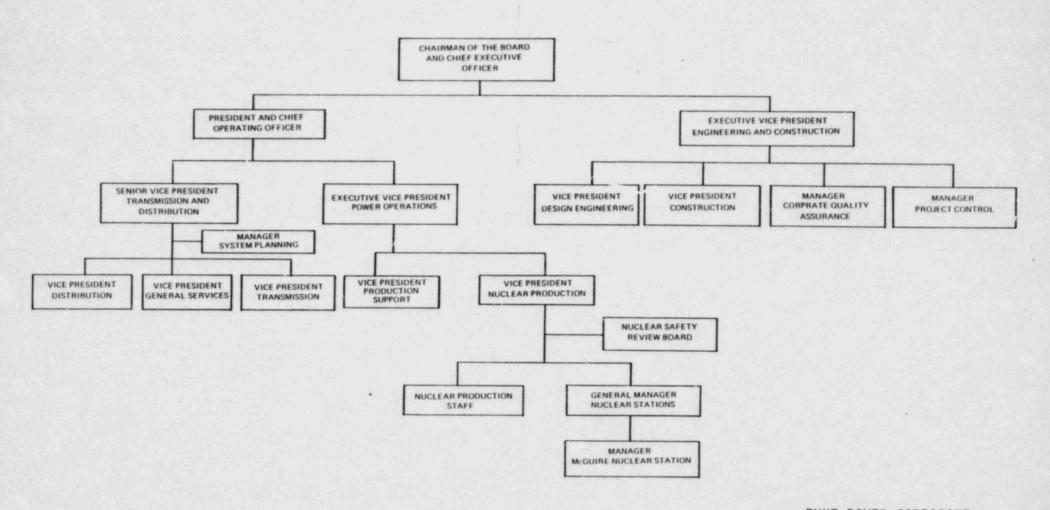
#### EDUCATION:

1967 B. S. Nuclear Engineering N. C. State University

### EXPERIENCE:

Duke Power Company

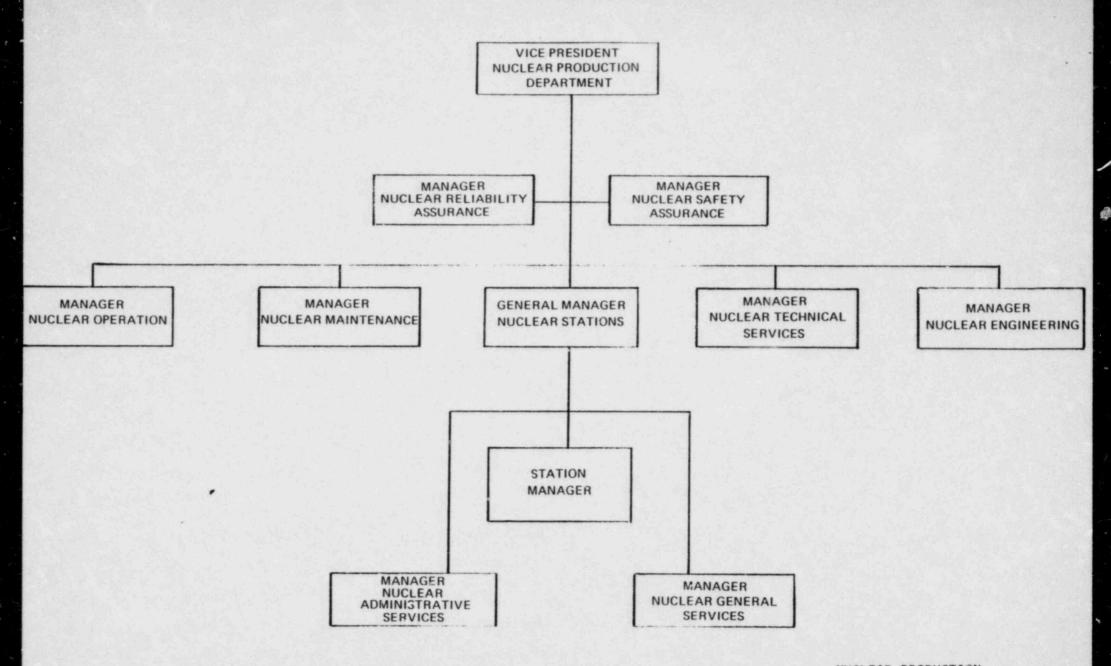
Various assignments in Design Engineering and Steam Production Department (1967-73) Nuclear Fuels Engineer (1973-75) System Nuclear Fuels Engineer (1975-76) Manager, Nuclear Fuel Services (1976-Present)





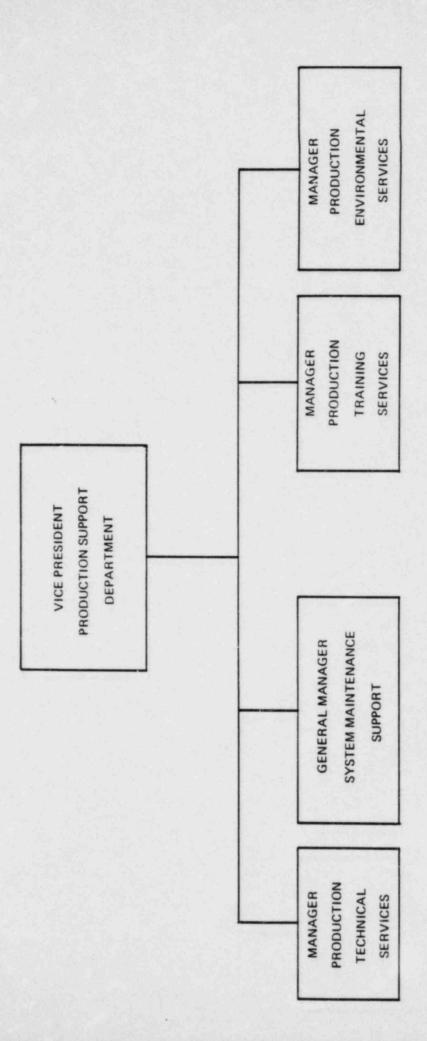
DUKE POWER CORPORATE
ORGANIZATION
CATAWBA NUCLEAR STATION

Figure 13.1.1-1 Rev. 7



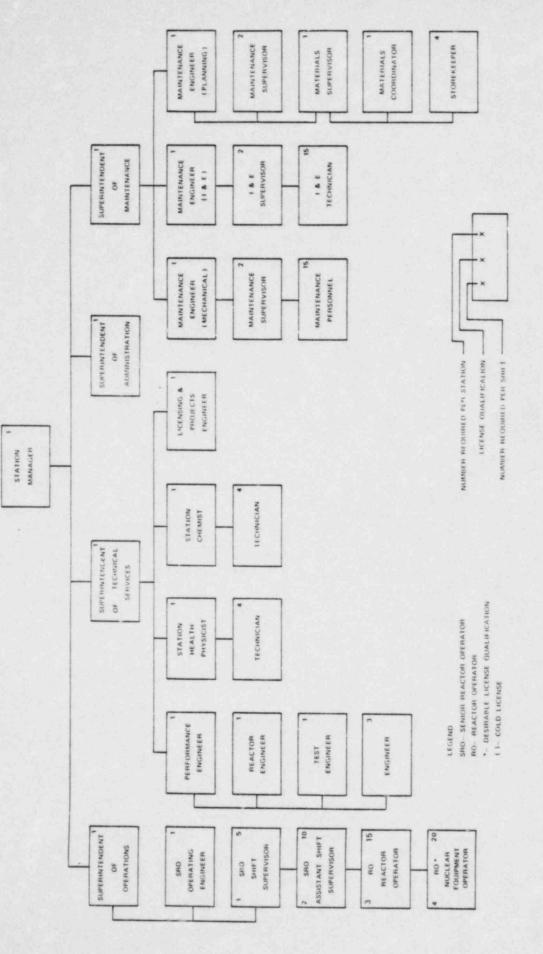


NUCLEAR PRODUCTION DEPARTMENT ORGANIZATION CATAWBA NUCLEAR STATION Figure 13.1.1-3 Rev. 7





PRODUCTION SUPPORT
DEPARTMENT ORGANIZATION
CATAWBA NUCLEAR STATION
Figure 13.1.1-4
Rev. 7



STATION ORGANIZATION
TWO-UNIT OPERATION
CATAWBA MUCLEAR STATION
Figure 13.1.2-1
Rev. 7

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### 13.2 TRAINING

#### 13.2.1 GENERAL PROGRAM DESCRIPTION

The principal objective of the nuclear station training program is to assure qualification of all station personnel through effective training. The program is also designed to accommodate future growth and meet commitments to and comply with applicable established regulations.

Qualification, with respect to training is indicated by successful completion of prescribed formal training, demonstration of the ability to perform assigned work or tasks competently with a minimum of supervision, and where required by regulation, holding a current and valid license issued by the agency establishing the requirement.

The Vice President Production Support has overall responsibility for the administration and conduct of the training program. The station Manager is responsible for the timely and effective development of assigned personnel. The station Training and Safety Coordinator is responsible for coordinating the day-to-day support activities for all training. The Nuclear Production Department's Nuclear General Services Group, with input and assistance from applicable General Office technical staff, assists the station Manager in accomplishing related training responsibilities.

Training is developed and conducted according to a systematic plan as shown on Figure 13.2.1-1. The plan provides the employee with formal training to establish the knowledge foundation and structured on-the-job training to perfect work performance skills. Special training is provided, as required, to accommodate further employee growth in specific areas. Periodic and general station training aid in maintaining these knowledge and skill components.

The nuclear station training 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 regulatory requirements.

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

Training instructors who teach systems, integrated responses, transient, and simulator courses to operations personnel at Catawba either have previously held an SRO license or will successfully complete an SRO certification. Instructors are required to participate in periodic refresher/requalification training to maintain current knowledge of plant modifications procedural changes and administrative policies. This training will parallel the operator requalification program described in Section 13.2.2.3.

# 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. Off-site review is performed by the Nuclear Safety Review Board (NSRB) whereas onsite review is performed by the Nuclear Station Safety Review Group (SRG) and by other 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 ONSITE REVIEW

Qualified individuals from the station supervisory staff are assigned to review procedures, procedure changes, Technical Specifications changes and plant modifications involving nuclear safety. These individuals are previously designated by the station Manager to perform these reviews. The final approval of the above reviews is by the station Manager or other senior station management. 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.

Incident investigation including LERs and special reviews are performed by the SRG or other designated qualified individuals.

#### 13.4.2 INDEPENDENT REVIEW

# 13.4.2.1 OFFSITE

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 Operations; Vice President, Nuclear Production; and the applicable station Manager.

The membership of the NSRB collectively has the competence required to review problems in the following areas: Nuclear power station operations, nuclear engineering, chemistry, radio-chemistry, metallurgy, instrumentation and control, radiological safety, mechanical engineering and electrical engineering. and administrative control and quality assurance practices. The NSRB is composed of not less than five persons, of whom no more than one is a member of the station organization. A quorum consists of three 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.

13.4-1

### 13.5 STATION PROCEDURES

#### 13.5.1 ADMINISTRATIVE PROCEDURES

# 13.5.1.1 Conformance With Regulatory Guides

Regulatory Guide 1.33, Revision 2, "Quality Assurance Program Requirements," and ANSI N18.7-1976, "Standard for Administrative Controls for Nuclear Power Plants", is being used for the preparation of administrative and plant procedures.

# 13.5.1.2 Preparation of Procedures

For operating, emergency, maintenance, instrument, periodic test, chemistry, radioactive waste management, health physics, emergency preparedness and modification 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 Production Department General Office, the Design Engineering Department and other departments within Duke; and by personnel from the NSSS supplier and other vendors; as appropriate. Following resolution of review comments, if any, 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, crossdisciplinary review is required. After all required and appropriate reviews have been completed a final version of a procedure is prepared. Upon approval by the station Manager; or by the Superintendent of Operations, Superintendent of Maintenance or Superintendent of Technical Services as previously designated, a procedure becomes available for use. Additional discussion of procedure preparation control is contained in Section 17.2.6 of Topical Report, DUKE-1A, Quality Assurance Program and in the Technical Specifications. A typical schedule for completion of station procedures is given in Figure 13.5.1-1.

Administrative, annunciator response, security and material control procedures are prepared by qualified personnel, reviewed as necessary and approved by the station Manager or his designee prior to use.

# 13.5.1.3 Administrative Procedures

Station administrative procedures (Station Directives) are written as necessary to control station testing, maintenance, and operating activities. Listed below are several areas for which administrative procedures are written, including principle features:

(a) 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 designated in the operating procedures.