


**KEWAUNEE NUCLEAR POWER PLANT**

**OPERATIONAL QUALITY ASSURANCE PROGRAM DESCRIPTION**

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## INTRODUCTION

The policy of Wisconsin Public Service Corporation is to comply with the requirements of the Operational Quality Assurance Program (OQAP) which is authorized under the direction of the Vice President-Nuclear. The OQAP fulfills the requirements of 10CFR50 Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." Compliance with the OQAP is mandatory for applicable WPS Resources Corporation employees. Equivalent measures appropriate to the circumstance shall be enforced upon suppliers of materials, equipment or services.

The Operational Quality Assurance Program is established to define, implement and audit operation, maintenance, and modification activities related to nuclear plant safety. The OQAP complies with the provisions of ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants," with exceptions, interpretations, and qualifications noted in Appendix A of this description.

### 1.0 ORGANIZATION

#### 1.1 General Requirements

All members of the organization involved in operation of the Kewaunee Nuclear Power Plant (KNPP) shall be made aware of and recognize the necessity for well formulated and detailed administrative controls to assure safe and efficient operation. Lines of authority, responsibility and communication are established under the direction of the Vice President-Nuclear and identify all levels of management involved in the OQAP, (See Figures 1 & 2). The quality assurance functions performed by each organizational element are cited in the descriptions below.

## 1.2 Duties and Responsibilities

### SENIOR VICE PRESIDENT- ENERGY SUPPLY

This Position has responsibility for the generation, transmission, planning, and fuel procurement for all of Wisconsin Public Service Corporation. This position reports directly to the Chairman and Chief Executive Officer for nuclear responsibilities. This position has delegated specific authority and responsibilities as described below to the groups shown in Figures 1 and 2. The Nuclear Organization reports to the Senior Vice President – Energy Supply.

### VICE PRESIDENT - NUCLEAR

This position has responsibility for all matters relating to the administration, engineering, design, manufacture, construction, installation, maintenance, modification, test, startup, licensing, commercial operation, and quality assurance of the Kewaunee Nuclear Power Plant. This position has delegated specific authority and responsibility to the groups shown in figure 2. He maintains authority and responsibility for specific NRC correspondence such as 10CFR21 reports, license amendments and written correspondence signed under oath or affirmation in accordance with 10CFR50.54(f). This position is also responsible for the approval of the WPSC Operational Quality Assurance Program. Reporting to the Vice President – Nuclear, is the Manager – Kewaunee Plant, the Manager – Engineering & Technical Support, the Manager – Support Services, and the Manager – Quality Programs. The Vice President – Nuclear is responsible for budgeting and record keeping associated with the previously identified activities and has delegated those respective responsibilities to the appropriate managers.

MANAGER - NUCLEAR FUEL

This position is responsible for procurement, management, and disposition of nuclear fuel and nuclear fuel materials and the implementation of the quality assurance requirements associated with these functions. The Manager - Nuclear Fuel has been delegated the responsibility for reviewing and approving the directives which control the activities affecting quality performed by the Nuclear Fuel Cycle Group and the Nuclear Fuel Analysis Group. The Manager - Nuclear Fuel is also responsible for ensuring that the directives implement the requirements of the OQAP, and ensuring support is available for special projects involving KNPP.

GENERAL MANAGER - TRANSMISSION

This position is responsible for substation and transmission activities and the implementation of the quality assurance requirements associated with these functions.

The Substation and Transmission Group is responsible for implementing the OQAP, as applicable, whenever their work involves KNPP.

MANAGER - CORPORATE SERVICES

This position is responsible for the implementation of the Operational Quality Assurance Program requirements associated with the activities affecting quality performed by the Purchasing and Stores Group, Project & Facility Services, and Information Technology Services involving KNPP and ensuring support is available for special projects involving KNPP.

A. Purchasing and Stores

The Purchasing and Stores Group is responsible for providing support to procurement activities for KNPP.

B. Project & Facility Services

The Project & Facility Services Group is responsible for providing engineering and design support for KNPP, as requested. They also have responsibility for preparation, review, revision and issue of appropriate directives which control engineering activities performed primarily by this group

C. Information Technology Services

The Information Technology Services is responsible for providing for computer system support for KNPP.

### NUCLEAR BUSINESS GROUP

This group is responsible to the Vice President - Nuclear for providing general support to the entire Nuclear Department in key business related areas, including budgeting and planning, development of strategic issues and plans, and purchasing. This group is also responsible for providing interface with the WPSC corporate departments and with external agencies such as the Joint Plant Operating Committee, the Public Service Commission of Wisconsin, and other regulatory and industry groups.

### MANAGER - KEWAUNEE PLANT

This position is responsible to the Vice President - Nuclear for the safe and reliable operation and maintenance of the plant in accordance with the requirements of the OQAP. This position has the responsibility for the review, approval, and verification of implementation of nuclear administrative directives affecting quality for his areas of responsibility. These areas include maintenance, operations, instrument and control, radiation protection, radiochemistry, and planning and scheduling, as described below:

Plant Maintenance – (Electrical/Mechanical/Instrument & Control) - is responsible for maintenance of plant equipment, maintenance engineering activities and supply group activities.

Plant Operations – is responsible for plant operations including general supervision of all shift operating personnel.

Plant Radiation Protection – is responsible for radiation protection, plant health physics activities, and the Radiological Environmental Monitoring Program.

Plant Radiochemistry – is responsible for plant chemistry activities.

Planning and Scheduling – is responsible for plant outage coordination activities, administration of the work request system, and planning and scheduling for routine maintenance activities.

### MANAGER - ENGINEERING & TECHNICAL SUPPORT

This position is responsible for the leadership and supervision of the Engineering and Technical Support group. The responsibilities of this position are centered around providing engineering support to the Kewaunee Nuclear Power Plant. The aspects of this support include, but are not limited to, the evaluation and implementation of physical changes to the plant, engineering evaluations of plant performance, licensing issues, licensing support (including interface with the NRC), administration and implementation of engineering programs, providing specialized analytical skills as needed to support the plant, providing engineering support on a plant systems basis. This position has the responsibility for review, approval, and verification of implementation of nuclear administrative directives affecting quality for his area of responsibility. These areas are described below:

Physical Change - The physical change process is the method for implementing changes to the plant such as permanent plant modifications/changes, temporary plant modifications/changes, and procurement technical evaluations. This area is not permanently staffed, but rather, is a process supported by the engineering and technical support staff.

Engineering Programs - All program areas are responsible for providing the specialist for that program. The program specialist is responsible for the management of the program, program performance and implementation. Project teams will be created when appropriate by supplementing the program specialists with Engineering & Technical Support staff or other nuclear staff. Responsibilities of the specialist and team include interaction with customers, senior nuclear management, and external entities (e.g., NRC, INPO, etc.) as necessary. The program team has complete ownership of the program, i.e., responsibility and accountability for successful implementation of the program.

Examples of program areas are listed below:

NPRDS/Performance Reporting Program

ISI Program

Reactor Engineering Program

IST/Check Valve Program

Steam Generator Program

Licensing Program

STA Program

Heat Exchanger Performance Program

Turbine Program

Engineering and Technical Support (E&TS) Group - The groups are responsible for providing the engineering and technical support for all plant processes, programs and systems. This includes supporting physical change, programs, projects, evaluations, maintenance of the USAR, Tech Specs, Tech Spec basis, system descriptions, drawings, specifications, procedures, Power Plant Facilities Information System (PPFIS), Material Components System (MCS), and QA typing documentation. Multi-discipline or multi-department teams are employed to address the engineering needs of the plant, where necessary.



Analytical Engineering - This group is responsible for providing specialized or computer based analysis support to the various groups in the E&TS. Engineering support provided by Analytical Engineering includes Accident Analysis, Probabilistic Risk Assessment, Piping Support and Stress Analysis, Equipment Qualification, Electrical Distribution and Coordination, Set point Analysis, and Seismic Analysis/SQUG. Personnel assigned to this group are responsible for assuring their tools comply with the QA criteria for safety-related software, programmatic requirements, and commitments associated with their efforts.

Evaluations and Projects - The evaluations/projects process is a standard methodology for performing projects and evaluations. This area is not permanently staffed but is a process used by all engineering and technical support staff. Examples of existing evaluation processes that will be combined into this process are Operating Experience Assessments (OEA's), and Kewaunee Assessment Process (KAP), etc. The completion of the evaluation does not necessarily end the involvement in the activity. Should the evaluation lead to a physical change, or ongoing project, the team would be expected to continue involvement as required to ensure successful completion.

MANAGER - NUCLEAR PLANT SUPPORT SERVICES

This position is responsible for plant activities associated with Training, Plant Protective Services, Nuclear Emergency Preparedness, and Administrative/Human Resources. This position has the responsibility for review, approval, and verification of implementation of nuclear administrative directives affecting quality for his area of responsibility. Those areas of responsibility for the Manager -Nuclear Plant Support Services include:

Nuclear Training - Nuclear Training has been delegated the responsibility to develop, maintain, and provide employee training that meets the needs of the Kewaunee Nuclear Power Plant (KNPP) and supports the needs of Wisconsin Public Service Resources (WPSR). Nuclear Training is responsible for the accredited training programs as described in National Academy of Nuclear Training Document 91-016, The Process for Accreditation of Training in Nuclear Power Industry. Specific responsibilities and duties for the various training activities are defined in the appropriate directives and implementing procedures.

Plant Protective Services - is responsible for plant security and fitness for duty programs. Specific responsibilities and duties for the various protective services activities are defined in the appropriate directives and implementing procedures.

Administrative/Human Resources - is responsible for plant administrative activities and personnel issues. Specific responsibilities and duties for the various administrative/human resource activities are defined in the appropriate directives and implementing procedures.

Nuclear Emergency Preparedness - is responsible for the maintenance of an effective emergency preparedness program. Specific responsibilities and duties for the various nuclear emergency preparedness activities are defined in the appropriate directives and implementing procedures.

### MANAGER-QUALITY PROGRAMS

This position is responsible to the Vice President-Nuclear for ensuring that an Operational Quality Assurance Program (OQAP) is developed, implemented, and maintained to meet the licensing requirements and management objectives. This position is responsible for final review of changes to the OQAP and for final approval of changes to the implementing directives. This position is responsible for review of directives which control activities affecting quality. The Manager-Quality Programs is independent of cost and scheduling considerations and has the authority and organizational freedom to identify quality problems, stop work on non-conforming activities associated with modifications (new construction) until deficiencies have been corrected; initiate, recommend or provide solutions, and verify implementation of corrective actions. The Manager- Quality Programs maintains stop work authority for nonconforming activities associated with plant operations by reporting them to the Vice President-Nuclear. This position is responsible for ensuring that functions and activities of the Quality Programs Staff are controlled and performed in accordance with approved directives which implement the requirements of the OQAP. The Quality Programs Staff has the responsibility for verifying the effectiveness of plant quality activities. The Quality Programs Staff is comprised of:

Quality Process Control/Inspection - Field inspection activities, which includes but is not limited to, material receipt, QC hold points, NDE, and other activities normally associated with traditional quality control.

Quality Auditing/Assessment - Programmatic reviews and observations to determine program effectiveness and assessments normally associated with quality assurance auditing.

Quality Procurement - Review and evaluations of procurement activities, including but not limited to, purchase requisition documents, vendor and manufacturer evaluations.

Management Information - Is primarily responsible for receipt, maintenance, and overall control of records associated with the Kewaunee Nuclear Power Plant.

The Manager - Quality Programs shall as a minimum meet the requirements of ANSI N18.1-1971 and should have a minimum of a B. S. degree in Science or Engineering from an accredited college or university, a minimum of five years experience in power plant construction, engineering and/or plant operation, and a familiarity with codes and regulations.

NUCLEAR SAFETY REVIEW AND AUDIT COMMITTEE (NSRAC)

NSRAC is responsible to a Senior Company Officer for review and audit of plant related matters concerning safety. The requirements for personnel, committee composition, meeting frequency, quorum and meeting records shall be as identified below and in accordance with the requirements of the NSRAC Charter. The Committee periodically reviews the results of the Quality Programs Staff audits and is responsible for conducting reviews as part of the Independent Technical Review Program.

1. Function

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

- A. Nuclear Power Plant Operations
- B. Nuclear Engineering
- C. Chemistry and Radio-Chemistry
- D. Metallurgy
- E. Instrumentation
- F. Radiological Safety
- G. Mechanical and Electrical Engineering
- H. Quality Assurance Practices
- I. Other appropriate fields as determined by the Committee, to be associated with the unique characteristics of the nuclear power plant.

2. Composition

The NSRAC shall be composed of, but not necessarily limited to:

- A. At least three technically qualified persons who are not members of the plant staff.
- B. One member from the supervisory staff of the plant.
- C. At least two qualified non-company affiliated technical consultants.
- D. In-house staff management advisors as required.

The Committee membership and its Chairman and Vice Chairman shall be appointed by the Senior Company Officer to whom the NSRAC reports. Each member of the NSRAC shall have an academic degree in an engineering or physical science field; and in addition, shall have a minimum of five years technical experience, of which a minimum shall be in one or more areas given in paragraph 1., "Function".

3. Alternates

Alternate members shall be appointed by the NSRAC Chairman, upon approval by the Vice President - Nuclear, to serve on a temporary basis; however, no more than two alternates shall participate in NSRAC activities at any one time.

4. Consultants

Consultants may be utilized as determined by the Chairman - NSRAC to provide expert advice to the NSRAC.

5. Meeting Frequency

The NSRAC shall meet at least once every six months.

6. Quorum

A quorum of the NSRAC shall consist of the Chairman or Vice Chairman and four members including alternates. No more than a minority of the quorum shall have line responsibility for operation of the plant.

7. Review

The NSRAC shall review:

- A. Safety evaluations for 1) changes to procedures, equipment or systems and 2) tests or experiments completed under the provision of 10 CFR 50.59, 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 10 CFR 50.59.
- C. Proposed tests or experiments which involve an unreviewed safety question as defined in 10 CFR 50.59.
- D. Proposed changes in Technical Specifications or licenses.
- E. Reports covering violations of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance.
- F. Reports covering significant operating abnormalities or deviations from normal and expected performance of plant equipment that affect nuclear safety.
- G. Reports covering all REPORTABLE EVENTS.

- H. Reports covering any indication of an unanticipated deficiency in some aspect of design or operation of safety-related structures, systems, or components.
- I. Reports and meeting minutes of the PORC.

#### 8. Audits

Audits of plant activities shall be performed under the cognizance of the NSRAC.

These audits shall include:

- A. Conformance of plant operation to the provisions contained within the Technical Specifications and applicable license conditions.
- B. Performance, training, and qualifications of the entire plant staff.
- C. Results of all actions taken to correct deficiencies occurring in plant equipment, structures, systems, or method of operation that affect nuclear safety.
- D. Performance of all activities required by the Quality Assurance Program to meet the criteria of Appendix "B", 10 CFR Part 50.
- E. The Plant Fire Protection Program, implementing procedures and the fire protection and loss prevention program.
- F. Any other area of plant operation considered appropriate by the NSRAC or the Senior Company Officer to whom the NSRAC reports.
- G. The Radiological Environmental Monitoring Program and the results thereof.
- H. The OFF-SITE DOSE CALCULATION MANUAL and implementing procedures.
- I. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes.



9. Authority

The NSRAC shall report to a Senior Company Officer and shall advise the Officer on those areas of responsibility specified in paragraph 7, "Review" and paragraph 8, "Audits".

10. Records

Records of NSRAC activities shall be prepared, approved and distributed as follows:

- A. Minutes of each NSRAC meeting forwarded to the Senior Company Officer to whom the NSRAC reports within 14 days following each meeting.
- B. Reports of reviews required by paragraphs 7.E through 7.H, forwarded to the Senior Company Officer to whom the NSRAC reports within 14 days following completion of the review.
- C. Reports of audits performed by NSRAC shall be forwarded to the Senior Company Officer to whom the NSRAC reports and to the management positions responsible for the areas audited within 30 days after completion of the audit.

PLANT OPERATIONS REVIEW COMMITTEE (PORC)

PORC is responsible to the Manager - Kewaunee Plant for providing advice on matters relating to nuclear safety at the plant. The requirements for personnel, committee composition, meeting frequency, quorum and meeting records shall be as identified below and the PORC Charter. PORC is also responsible for conducting reviews as part of the Independent Technical Review Program.

1. Function

The PORC shall function to advise the Manager - Kewaunee Plant on matters related to nuclear safety.

2. Composition

The PORC shall be composed of key supervisors of the on-site staff from the following disciplines: Operations, Maintenance, Instrument and Control, Reactor Engineering, Quality, and Radiological.

3. Alternates

Alternate members shall be appointed in writing by the PORC Chairman to serve on a temporary basis; however, no more than two alternates for required members shall participate in PORC meetings at any one time.

4. Meeting Frequency

The PORC shall meet at least once per calendar month and as convened by the Chairman.

5. Quorum

A quorum of the PORC shall consist of the chairman (or his designated alternate) and a majority of the required members including temporary alternates.

## 6. Responsibilities

The PORC shall be responsible for:

- A. Review of operating, maintenance and other procedures including emergency operating procedures which affect nuclear safety as determined by the Manager - Kewaunee Plant. Changes to those procedures are made in accordance with the provisions of TS 6.8.a and TS 6.8.b.
- B. Review of all proposed tests and experiments that affect nuclear safety.
- C. Review of all proposed changes to the Technical Specifications.
- D. Review of all proposed changes or modifications to plant systems or equipment that affect nuclear safety.
- E. Review of all proposed changes to the Security Plan, Fire Plan, and their respective implementing procedures.
- F. Review all reports covering the investigation of all violations of the Technical Specifications and the recommendations to prevent recurrence.
- G. Review plant operations to detect potential safety hazards.
- H. Performance of special reviews and investigations and prepare reports thereon as requested by the Chairman of the Nuclear Safety Review and Audit Committee.
- I. Review of all REPORTABLE EVENTS
- J. Review of changes to the PROCESS CONTROL PROGRAM, the OFF-SITE DOSE CALCULATION MANUAL, and the RADIOLOGICAL ENVIRONMENTAL MONITORING MANUAL.

7. Authority

The PORC shall:

- A. Recommend to the Manager - Kewaunee Plant approval or disapproval of items considered under preceding paragraphs 6.A through 6.E.
- B. Make determinations with regard to whether or not each item considered under paragraph 6 constitutes an unreviewed safety question.
- C. Provide immediate notification in the form of draft meeting minutes to the Vice President - Nuclear and the Chairman - Nuclear Safety Review and Audit Committee of disagreement between the PORC and the Manager - Kewaunee Plant. The Manager - Kewaunee Plant shall have responsibility for resolution of such disagreements.

8. Records

Minutes shall be kept of all meetings of the PORC and copies shall be sent to the Vice President - Nuclear and the Chairman - Nuclear Safety Review and Audit Committee.

QUALITY ASSURANCE TYPING COMMITTEE

This Committee is responsible to the Manager - Engineering & Technical Support for changes to classification of systems, structures and components within the nuclear power plant according to the importance of the function they serve with respect to plant safety and operability. The description of the committee's duties and authority shall be established in various directives and the QA Typing Committee Charter.

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## 2.0 QUALITY ASSURANCE PROGRAM

### 2.1 General

The Operational Quality Assurance Program complies with the requirements of 10CFR50, Appendix B, the provisions of ANSI N18.7-1976 and the Regulatory Guides which endorse the daughter standards required by ANSI N18.7-1976 with the exceptions, interpretations, and qualifications noted in Appendix A of this description. The requirements of the OQAP apply to those activities which affect the quality of structures, systems or components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. All structures, systems, and components are classified as QA Type 1, 2, 3 or N according to their function and importance in relation to the safe operation of the reactor, with emphasis on the degree of integrity required to protect the public. The OQAP requirements are mandatory for all QA Type 1 items. QA Type 2 and 3 items, as determined by management, may require special control and an "X" modifier may be added to the QA2 or QA3 type designation. All components and/or systems which are identified as Safety Class I in the Updated Safety Analysis Report (USAR) shall be categorized as QA Type 1. All nuclear fuel and core components shall be categorized as QA Type 1. The definitions and a list of the Safety Class I, II and III structures, systems and components are found in the Kewaunee USAR Appendix B, Table B.2-1.

During construction, QA types were established for plant equipment by a QA typing committee. The QA types for equipment subsequently added to the plant are established by the Responsible Engineer who installs the equipment under the Plant Physical Change program. The Plant Physical Change program exists under the requirements of the OQAP. Therefore, the QA types of equipment added since construction are controlled under the OQAP and its definitions. A change to an established QA type must be

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approved by the QA Typing Committee.

## 2.2 Requirements

It is mandatory for applicable WPS Resources employees to comply with the OQAP. It is the responsibility of the management charged with the implementation of the program to inform personnel working for them that the quality policies, OQAP manual, and procedures have mandatory requirements which must be implemented and enforced. The Superintendent - Nuclear Training is responsible for conducting training sessions as necessary to keep individuals informed of policies and changes to the OQAP. The lesson plans for these training sessions will be prepared under the cognizance of the Quality Programs Staff.

The OQAP shall be applied to all activities affecting safety-related functions and include: physical changes, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, modifying, engineering, and training. The control over these activities shall be applied to an extent consistent with their importance to safety and shall take into account the need for special controls, processes, tests, equipment, tools, and skills to attain the required quality, and the need for verification of quality by inspection, evaluation, or test.

## 2.3 Structure

The OQAP manual is the top level quality program document for operational phase activities. The OQAP is a manual which incorporates the requirements of 10CFR50 Appendix B, the provisions of ANSI N18.7-1976 and ANSI N45.2.23-1978 and Regulatory Guides 1.8-Rev. 1, 1.30, 1.37, 1.38-Rev. 2, 1.39-Rev. 1, 1.54, 1.58-August, 1973, 1.64-Rev. 2, 1.74, 1.88-Rev. 2 and 1.94. The requirements and responsibilities

identified by the manual are implemented through directives, procedures, and instructions which prescribe activities affecting quality. Technical reviews of directives are provided by department heads or process owners. Review of Nuclear Administrative Directives, and Fuel Management Directives for consistency with the OQAP is provided for by the Manager- Quality Programs.

Nuclear administrative directives are reviewed and approved by the appropriate responsible individual (i.e., Vice President -Nuclear, , the Manager - Kewaunee Plant, Manager - Engineering & Technical Support, Manager - Nuclear Plant Support Services or Manager- Quality Programs). These directives are prepared to govern activities affecting quality, such as physical changes, procurement, licensing, training, document control, operation, procedure control, material control, maintenance, and other related activities.

Fuel Management Directives are reviewed and approved by the Manager - Nuclear Fuel Services and are prepared to govern fuel management activities affecting quality, such as fuel procurement, reactor core performance and analysis, core design, and other related activities.

#### 2.4 Management Review

Management above or outside the Quality Programs organization shall routinely be informed of the status and adequacy of the OQAP. Audits of implementing directives shall be conducted to verify conformance to the program. Nonconformances or differences of opinion which cannot be settled between QP and the department involved shall be brought to the attention of upper management for resolution.

## 2.5 Indoctrination and Training

A training program shall be established in order to provide for developing and maintaining a staff qualified to operate, maintain and provide the necessary technical support. The indoctrination and training program shall provide for:

- A. Training personnel responsible for performing quality-affecting activities as to the purpose, scope and implementation of the quality-related manuals, instructions, and procedures.
- B. Establishing the scope and depth of indoctrination and training to be provided commensurate with the level of quality-affecting activities being performed by an individual.
- C. Training personnel who perform quality-affecting activities in the principles and techniques of the activity being performed.
- D. Training and retraining on an as-needed basis to maintain a level of quality commensurate with the quality-affecting activity being performed.
- E. Maintaining records of training sessions, attendance and content of the training session.



### 3.0 DESIGN CONTROL

Modifications to systems that are nuclear safety related, or as described in the USAR, and considered significant for nuclear safety shall be controlled by a Plant Physical Change Program established by directives to ensure compliance with the existing design and the requirements of 10CFR50.59. Directives shall be prepared to augment the following aspects of the Plant Physical Change Program:

- A. Establish the structure, authority and responsibilities of the groups or positions involved in design change activities.
- B. Correctly translate design inputs into specifications, drawings, procedures, or instructions.
- C. Identify and select the appropriate quality standards in design documents.
- D. Select and review the suitability of materials, parts, equipment and processes essential to the safety-related functions of the structure, system, or component.
- E. Assure that computer software, which is an integral part of the operation of equipment, is designed, documented and tested adequately.
- F. Assure the change is subject to at least the same measures applied to the original design, and provide for a second level review.
- G. Assign the responsibilities of all organizations involved in the Plant Physical Change process, both internal (KNPP) and external (contractor, vendor) and ensure a method of exchanging technical information across internal and external interfaces.

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PORC shall be responsible for reviewing proposed changes or modifications that affect nuclear safety. NSRAC shall review the safety evaluation of changes completed under the provision of 10CFR50.59 to verify that such actions do not constitute an unreviewed safety question.

#### 4.0 PROCUREMENT DOCUMENT CONTROL

Measures shall be established in directives to provide for the preparation of procurement documents to ensure that applicable regulations, design bases, and other QA program requirements are included or referenced. Procurement documents shall include, as appropriate: the scope of work; technical requirements; documentation requirements; requirements for hold and witness points; the allowance for access to supplier's facilities for review or audit of documentation or manufacturing procedures; and requirements that the supplier has a documented QA program in accordance with 10CFR50, Appendix B which includes a means for disposition of nonconformances.

The directives shall include measures to ensure that procurement documents are reviewed and approved by qualified and authorized personnel prior to release. The directives shall also provide assurance that the procurement document review includes a verification that quality requirements are stated in such a manner, that through either source surveillance and inspecting, supplier audits, or receipt inspection, the quality of the procured items may be verified.

#### 5.0 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

Measures shall be established in appropriate directives to control the preparation, format, content, and use of operating, test and maintenance procedures, and approvals for same. When required, they shall be prepared in sufficient detail to provide adequate guidance in performing activities affecting quality. These procedures shall include, as appropriate, initial conditions, step-by-step instructions, sign-off steps, acceptance criteria, etc., to ensure that activities

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affecting quality have been satisfactorily completed.

A Plant Physical Change Program shall be established by directives to assure that instructions, procedures, and drawings are used, where appropriate, to control activities associated with the modification of safety systems described in the USAR. These directives shall establish a method to update drawings, procedures, and other technical documents associated with the plant modification.

#### 6.0 DOCUMENT CONTROL

The generation, distribution, and revisions of documents that establish specifications or activities affecting quality shall be controlled by formal directives. These directives shall provide for the following document control measures:

- A. Identification of individuals or organizations responsible for preparing, reviewing, approving, and issuing documents and revisions, thereto.
- B. Identifying and providing the proper documents to be used in performing safety-related activities.
- C. Establishing distribution.
- D. Establishing a method of providing up-to-date documents to the controlled files.

#### 7.0 CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

Suppliers of material, equipment and services, including suppliers of spare or replacement parts, shall be selected based on an evaluation of the supplier's capability to provide the purchased items or services in accordance with the requirements of the procurement documents. Directives shall include methods for source evaluation and selection. One or more of the following considerations shall be included for source evaluation: evaluation of the supplier's history of

providing a product which performs satisfactorily in actual use; review of industry directories; review of whether the prospective supplier has a quality assurance program reviewed and inspected by the NRC under the Vendor Inspection Program; review of whether the prospective supplier has been recently audited by NUPIC (Nuclear Utilities Procurement Issues Committee) or similar third party inspection publication; review and evaluation of the supplier's Quality Assurance Program, Manual and Procedures, and the supplier's design and manufacturing capability; and a WPS survey of the prospective supplier's technical and quality capability by directly evaluating his facilities, personnel and the implementation of his quality assurance program.

A Qualified Suppliers System shall be established and maintained by directives developed under criteria imposed by the Operational Quality Assurance Program. Material, equipment, or services purchased from suppliers not on the Qualified Suppliers System shall undergo a review and evaluation to ensure conformance to the acceptable criteria established by the Quality Assurance Program. Directives shall also establish control measures to ensure that documentary evidence of the conformance of material and equipment to procurement requirements is available prior to installation or use.

#### **8.0 IDENTIFICATION AND CONTROL OF MATERIALS, PARTS, AND COMPONENTS**

Controls established for procurement shall ensure that safety-related materials, parts, and components are purchased under the requirements and documentation established by the Operational Quality Assurance Program. Implementing directives shall provide for a documented receipt and inspection of incoming material and equipment, along with providing a system for identifying the status of acceptable items to ensure use and installation of only correct and acceptable materials. Identification and traceability of safety-related materials, parts, or components from issuance to installation within the plant shall be provided by this system.

## 9.0 CONTROL OF SPECIAL PROCESSES

Special processes including welding and non-destructive examination shall be accomplished under controlled conditions by qualified personnel, in accordance with applicable codes, standards, specifications, criteria, and other special requirements. The Operational Quality Assurance Program is established to ensure compliance and implementation of these requirements.

## 10.0 INSPECTION

Concerning material receipt, directives shall establish a receipt inspection under the control of the Manager- Quality Programs, which provides for visual examination, receipt of required documentation, verification of identification, and on-site technical inspection.

Concerning modifications, the Plant Physical Change Program provides for the following requirements: special processes, test, measuring and test equipment, and cleanliness. The work package shall be reviewed by site Quality Programs personnel who have been appropriately trained to ensure that the required special installation procedures are included in the package or properly referenced. Verification of conformance to established requirements shall be performed by individuals or groups who do not have direct responsibility for performing the work being verified. Personnel or groups assigned responsibility for verification of inspection or testing shall be delineated in appropriate procedures and directives.

Plant personnel performing inspection, examination, and testing functions which are associated with normal operations of the plant and certain technical reviews normally assigned to the on-site operations organization shall be qualified to ANSI N18.1-1971.

Plant personnel who will be performing inspection, examination, and testing functions which are

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not associated with normal operations of the plant shall be trained and qualified in accordance with the requirements of Regulatory Guide 1.58, "Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel", and 10CFR50.55a, Subsection g, "Inservice Inspection Requirements", which endorse, with specific exceptions, ANSI N45.2.6-1973, "Qualifications of Inspection, Examination and Testing Personnel for the Construction Phase of Nuclear Power Plants", except that QA experience cited for levels I, II, and III shall be interpreted to mean actual experience in carrying out the type of activity being performed. Quality Programs personnel will be qualified to these references with the noted exceptions. WPS non-plant personnel who perform plant inspections, examinations and testing shall be trained and qualified in accordance with the above stated paragraph.

Additionally, this also applies to contract personnel working under the WPSC OQAP. Suitable review and acceptance must be made for qualification to other revisions or other standards the contractor's program may specify.

Training of personnel performing activities affecting quality shall be conducted to ensure that suitable proficiency is achieved and maintained.

#### 11.0 TEST CONTROL

A preoperational test program was conducted to demonstrate that structures, systems, and components would perform up to quality standards. A continuing operational test program is being conducted in accordance with Technical Specification surveillance requirements to ensure the operability of safeguard and safety-related structures, systems, and components. Plant directives and procedures shall provide for the prerequisites, evaluation, and documentation of these test results.

When required, the Work Request and Plant Physical Change Program shall provide for the testing and evaluation of test results for replacement, repaired, or modified structures, systems, or

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components.

## 12.0 CONTROL OF MEASURING AND TEST EQUIPMENT

Measuring and test equipment and reference standards (calibration standards) used for measurements, tests and calibration respectively, shall be of the proper range and type and shall be controlled, calibrated and adjusted, and maintained at specified intervals or prior to use to assure the necessary accuracy of calibrated devices. The referenced standards used shall have an accuracy range and stability which are adequate to verify that the equipment being calibrated is within required tolerance. The reference standards used shall be adequate for the requirements of the equipment being calibrated, shall be recertified against higher level equipment of closer tolerance, and shall be traceable to nationally recognized standards. The method and interval of calibration for measuring and test equipment and reference standards shall be specified and shall be based on the type of equipment, its characteristics and other conditions affecting calibration. When measuring and testing equipment or reference standards are found to be out of calibration, an evaluation shall be made of previous inspections and test results and acceptability of the items previously inspected.

## 13.0 HANDLING, STORAGE, AND SHIPPING

Nuclear administrative directives shall provide a system for material and equipment handled at and shipped from the plant to prevent damage, deterioration or loss. Where necessary, for sensitive or high value items, specific written instructions or procedures will be utilized. Where necessary, special handling tools and equipment will be utilized.

Directives shall provide for special provisions for the control of items which might cause risk to the general public if damage should occur.

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Directives shall also provide a system for controlling material during storage to prevent damage, loss, deterioration, or environmental damage. Housekeeping practices shall be controlled to prevent degradation in item quality.

#### 14.0 INSPECTION, TEST, AND OPERATING STATUS

The measures required in this criteria are applied to two general categories, material control and operational control. Inspection, test, and operating status provided by the material control program is implemented through plant directives which are controlled by the Quality Programs organization. Operational control, including the status of inspections, tests, and operations activities is described in plant directives which are controlled by the Operations and Planning and Scheduling organizations. All changes in procedures for these categories are reviewed by management. If the need for bypassing of a required inspection, test, or other critical operation occurs, it shall be procedurally controlled and reviewed by management.

##### 14.1 Material Control

A receipt inspection at the plant site shall identify the status of acceptable items and shall provide for the control of uninspected and nonconforming items to ensure use and installation of only correct and acceptable materials. Physical identification shall be used to the maximum extent possible to identify the status of materials inspected. The system shall provide for documentation traceable to the item and segregation and disposition of nonconforming items to preclude misuse.



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#### 14.2 Operational Control

The work control program shall include provisions for taking equipment out of service, identification of that equipment, and precautions or prerequisites for returning that equipment to service. The work request and supplemental documents shall be reviewed by Quality Programs personnel to ensure that special processes, inspection (hold and witness points) and testing requirements are adequately specified. They are also reviewed by operations personnel to determine the effect on plant operations, the proper tagging out of service of equipment, and the protection of personnel and equipment.

#### 15.0 NONCONFORMING MATERIALS, PARTS, OR COMPONENTS

When a nonconforming item is identified during a receipt inspection, the condition shall be documented on a Material Nonconformance Report and the item identified or segregated to preclude misuse, further processing, or installation pending disposition. Material Nonconformance Reports will be controlled and evaluated by cognizant plant personnel for the determination of the disposition of nonconforming items. Material Nonconformance Reports and dispositions shall be submitted to the responsible organization for implementation of corrective action. Provisions shall be established to ensure that items dispositioned as "repair" or "rework" shall be reinspected and require documentation verifying the acceptability of the item prior to release for use.

#### 16.0 CORRECTIVE ACTION

Conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective materials and equipment (post-receipt inspection), and nonconformances shall be identified on by Quality Assessment Reports and/or Kewaunee Assessment Process (KAP) forms. These reports provide the mechanism for all personnel to notify management of conditions adverse to quality.

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Measures shall be provided for the prompt processing of these reports to ensure expeditious investigation, evaluation, and implementation of corrective action. For situations determined to be significantly adverse to quality, investigations shall not only provide for identifying and correcting the condition, but also for determining the cause of the condition to ensure that corrective action is taken to preclude its recurrence.

Measures shall be established to ensure that KAP forms are promptly prepared and reviewed for events which may be potentially reportable to the NRC. The KAP form shall be evaluated by management for safety implications and Technical Specifications violations. The system shall provide for determination of corrective action to be taken, implementation of the corrective action, and final close out of the KAP form.

Measures shall be established in appropriate directives and Quality Procedures to control audit findings. These measures shall include a description of the unacceptable condition, corrective action to be taken, response time, verification of implementation of appropriate corrective action, and close out of the deficiency generated as a result of audits. These findings shall be documented on the Quality Assessment Report (QAR) and / or KAP form. Corrective action taken for audit findings shall be reviewed and verified. Disagreement between Quality Programs and the audited organization regarding corrective action shall be pursued through responsible management with the final authority resting with the Vice President-Nuclear.

Technical deficiencies and recommendations generated during technical reviews shall be documented with the report. Technical deficiencies and recommendations shall be submitted to the appropriate Nuclear Power Production Organization Manager for disposition as deemed necessary.

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## 17.0 QUALITY ASSURANCE RECORDS

Directives shall be prepared to control records that are generated during the operation of the Kewaunee Nuclear Power Plant. These directives shall identify the types of records that are to be controlled including requirements for storage.

Records shall be primarily maintained in the KNPP QA Vault, the main records storage facility. Frequently used records, not stored in the KNPP QA Vault shall be maintained in accordance with procedures which provide for proper control and protection of the records. Records may be maintained using microfilm, optical disk, or other approved technology provided appropriate quality control provisions have been established in the controlling procedures.

Records shall be kept for the prescribed periods of time in accordance with the requirements of Technical Specifications or Regulations. Directives shall provide for a system that permits the retrieval of information in a reasonable amount of time.

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## 18.0 AUDITS

Audits shall be conducted in accordance with appropriate directives, procedures, or instructions to verify that the requirements of the QA program are being implemented. Audits shall be conducted on, but not limited to, power plant operating and maintenance activities, engineering staff activities, Fuel Management activities, Purchasing Department activities, and Supplier activities. A comprehensive system of planned and documented audits shall be carried out to verify compliance with all aspects of the administrative controls and quality assurance program. Audits of selected aspects of operational phase activities shall be performed with a frequency commensurate with their 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 years. A quality assurance program has been developed to cover the auditable portions of the Technical Specifications over a five year interval.<sup>1,2</sup> Audits shall be performed by experienced personnel trained, in accordance with ANSI N45.2.23-1978, and independent of any direct responsibility of the activity being audited.

Preparation of procedures for audits, documentation of audit findings, and issuance of audit reports shall be described by applicable directives or procedures. Supervisory personnel of the audited activity shall review the audit report and provide corrective actions. Follow-up action shall be provided for by the OQAP to ensure that corrective action is implemented and adequate.

<sup>1</sup> Letter from C. W. Giesler (WPSC) to J. F. Streeter (NRC) dated August 22, 1983.

<sup>2</sup> Letter from R. L. Spessard (NRC) to C. W. Giesler (WPSC) dated September 30, 1983.

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APPENDIX A ANSI N18.7-1976 EXCEPTIONS, INTERPRETATIONS, QUALIFICATIONS  
GENERAL

ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants" is adopted to provide a basis for establishing an operational quality assurance program that meets the requirements of 10CFR50 Appendix B. This standard provides an acceptable means to satisfy the criteria of 10CFR50 Appendix B, but does not limit the use of alternate means to ensure safe operation of the plant. In this regard, those portions of this standard to which exceptions, interpretations and/or qualifications are taken are listed below.

Standards in general present objectives to be met with the method of implementation left general enough to provide for various interpretations for implementation. In the review of the program in accordance with the adoption of these new standards, many changes in implementation have been made. Where questions of interpretation were raised a conscientious interpretation has been formalized with the QP staff. Wherever future questions of interpretation arise they will be decided in a similar manner with continued disagreement being brought before corporate management for resolution.

When a short term or one time contradiction to the program is discovered, a non-conformance action will be taken within the QP organization to ensure a conscientious effort to maintain a quality level equivalent to the safety significance of the activity involved. When a long term or permanent contradiction to the program exists, a program change shall be implemented providing the same level of review as the adoption of this program, and the change will be submitted to the NRC.

Finally, wherever Technical Specifications overlap or contend with the administrative controls provided for in this program, the Technical Specifications will take precedence.

PARTICULAR EXCEPTIONS AND QUALIFICATIONS

ANSI N18.7-1976

## Section

- 3.1 Administrative controls shall be established necessary to comply with this standard as adopted, with the exceptions, interpretations, and qualifications addressed in this transmittal.
- 5.2.7.2 This paragraph requires that design activities associated with modification of safety-related structures, systems, and components shall be accomplished in accordance with ANSI N45.2.11-1974. We will commit to apply this standard to those design activities which we deem are comparable in nature and extent to similar construction related activities, the provisions of which shall be employed as applicable to the degree of importance to safety for the design project under consideration. We shall also adopt the Regulatory Position of Regulatory Guide 1.64, Rev. 2, June 1976, as requested with an exception to position C.2. We will follow our existing practice that design verification should not be performed by the originator's supervisor, except where expertise is not available other than the supervisor immediately responsible for the design.
- 5.2.9 This section requires that procedures be developed to supplement features and physical barriers designed to control access to the plant and, as appropriate, to vital areas within the plant. Plant security and visitor control measures are implemented in accordance with the Kewaunee Security Manual, required by 10 CFR 50.34(c).
- 5.2.12 This section specifies that ANSI N45.2.9-1974, "Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants", shall be used for management of plant records during the operational phase. Compliance with the provisions of this standard and the Regulatory Position of Regulatory Guide 1.88, Rev. 2, October 1976,

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shall be deemed applicable to the nature and scope of the work being performed and the importance of the item or service involved with the exceptions noted below.

5.2.15 This section requires that plant procedures which govern safety-related activities shall be reviewed by an individual knowledgeable in the area affected by the procedure no less frequently than every two years to determine if changes are necessary or desirable. WPSC has alternate programs in place that make a biennial review process unnecessarily duplicative. These alternate programs ensure procedures are periodically reviewed and maintained current when pertinent source material is revised, plant physical changes are made, and/or any deficiencies occur. WPSC will also implement measures specifying that infrequently scheduled plant procedures that have not been used or reviewed for two years should be reviewed before use. Due to the significance of the Integrated Plant Emergency Operating Procedures (IPEOP's), the biennial review of the IPEOP's will be continued.

Alternate programs in place include the following:

1. Technical Specification revision process

This process includes a review of affected plant procedures upon the approval of a Technical Specification Amendment and subsequent revisions as appropriate.

2. Physical Change Program

Nuclear department heads are notified of modifications and are requested to review affected plant procedures. Revisions to procedures are verified as part of the Physical Change closeout process.

3. Various Self-Assessment Programs

During self-assessment activities, procedures may be identified that contain significant discrepancies. Revisions are made as appropriate.

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4. Kewaunee Assessment Process (KAP)

Any procedures identified as being in need of revision during the KAP evaluation process are revised before the KAP corrective action is closed out.

5. Quality Assurance Program

At least every two years, a surveillance will be performed whereby randomly selected safety-related procedures would be checked for added assurance of timely revision of procedures.

6. Operating Experience Assessment Program

During operating experience assessment activities, procedures may be identified that contain significant discrepancies or require change. Revisions are made as appropriate. Significant changes to vendor manuals are evaluated as part of this program.

ANSI N45.2.9-1974

Section

4.3 & 4.4                      Concerning Receipt Control.

The Records Management Group has been designated as the group responsible for receiving and storing records. This staff does not control which records are sent to them, however, there is a record index system identifying which records are under the control of the QA Program. We have assigned responsibility for assuring QA records are retained in the KNPP QA Vault to the various department heads or process owners. Also there is no log of incoming records. However, the previously-mentioned index is kept up to date and serves as a list of records received and retained. We have a procedure which partially covers the receipt control of records but none specifically for this action. We do not plan at this time to implement any further controls on the receipt of records.



ANSI N45.2.9-1974

Section

5.6 Concerning Permanent and Temporary Storage Facilities.

Criteria specified in this paragraph for those records stored in the KNPP QA Vault are met; however, the use of temporary storage facilities, the definition of a working QA document and the transport of QA records to the vault differ.

Several in-house generated QA documents/records are maintained in working files, e.g., NSRAC Meeting Minutes, training records and radiological survey data. These documents/records which we feel are working documents until no longer used on a routine basis are kept in locked, fire-proof file cabinets and are periodically transferred to the KNPP QA Vault. Duplication or filing in the vault would be unacceptable due to the quantity and frequent use of these documents.

We find our handling of these documents acceptable due to the relative short duration of filing in temporary quarters and relative insensitivity of these documents to the safety of the plant.

Finally, we do not have a courier service to immediately transfer a QA record just completed to the vault. Some records are transferred by personal delivery and others through the routine in-company mail service. At this time we do not plan to implement any further controls on transferring documents to the KNPP QA Vault.

FIGURE 1  
OFFSITE FUNCTIONAL QUALITY ASSURANCE ORGANIZATION

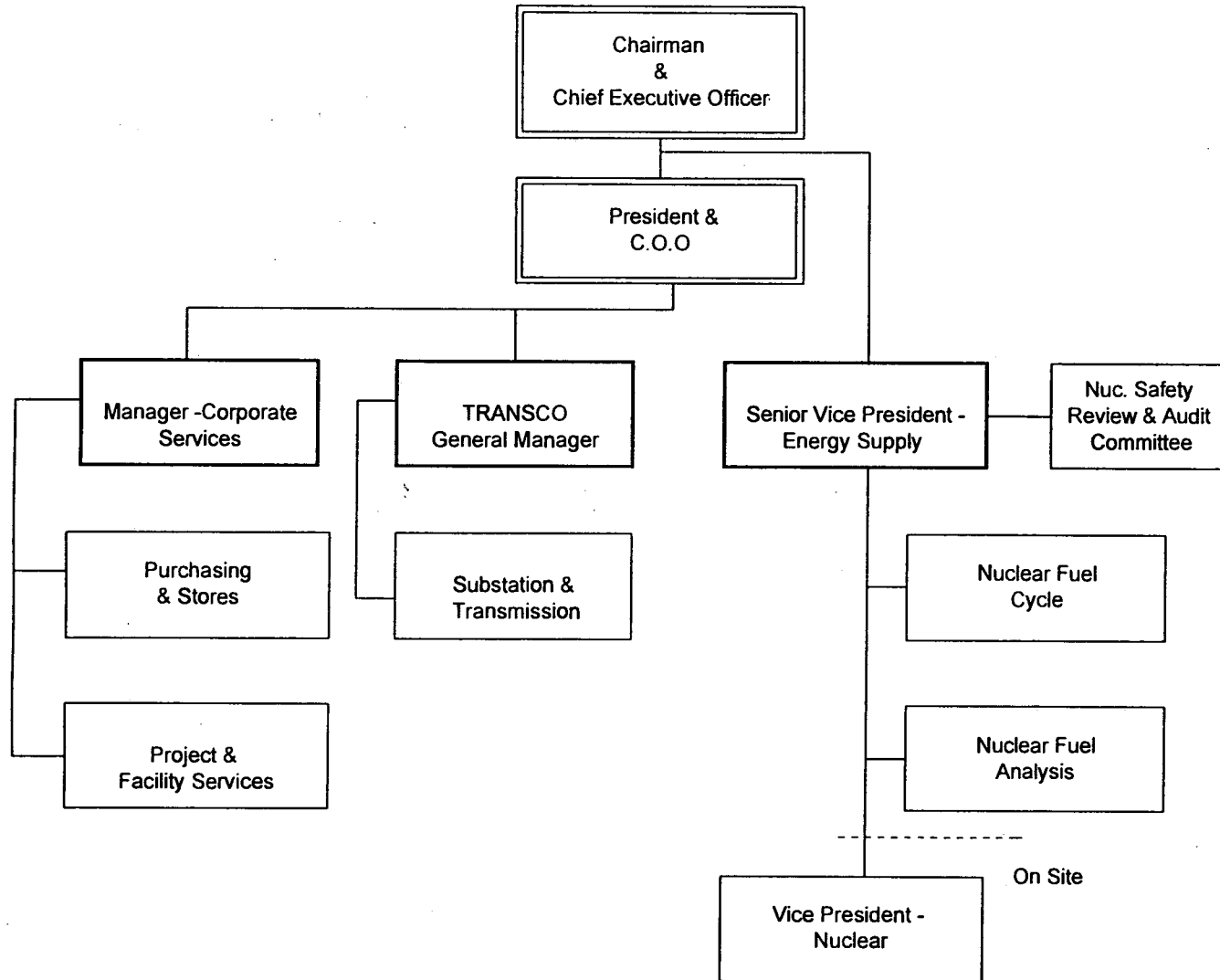
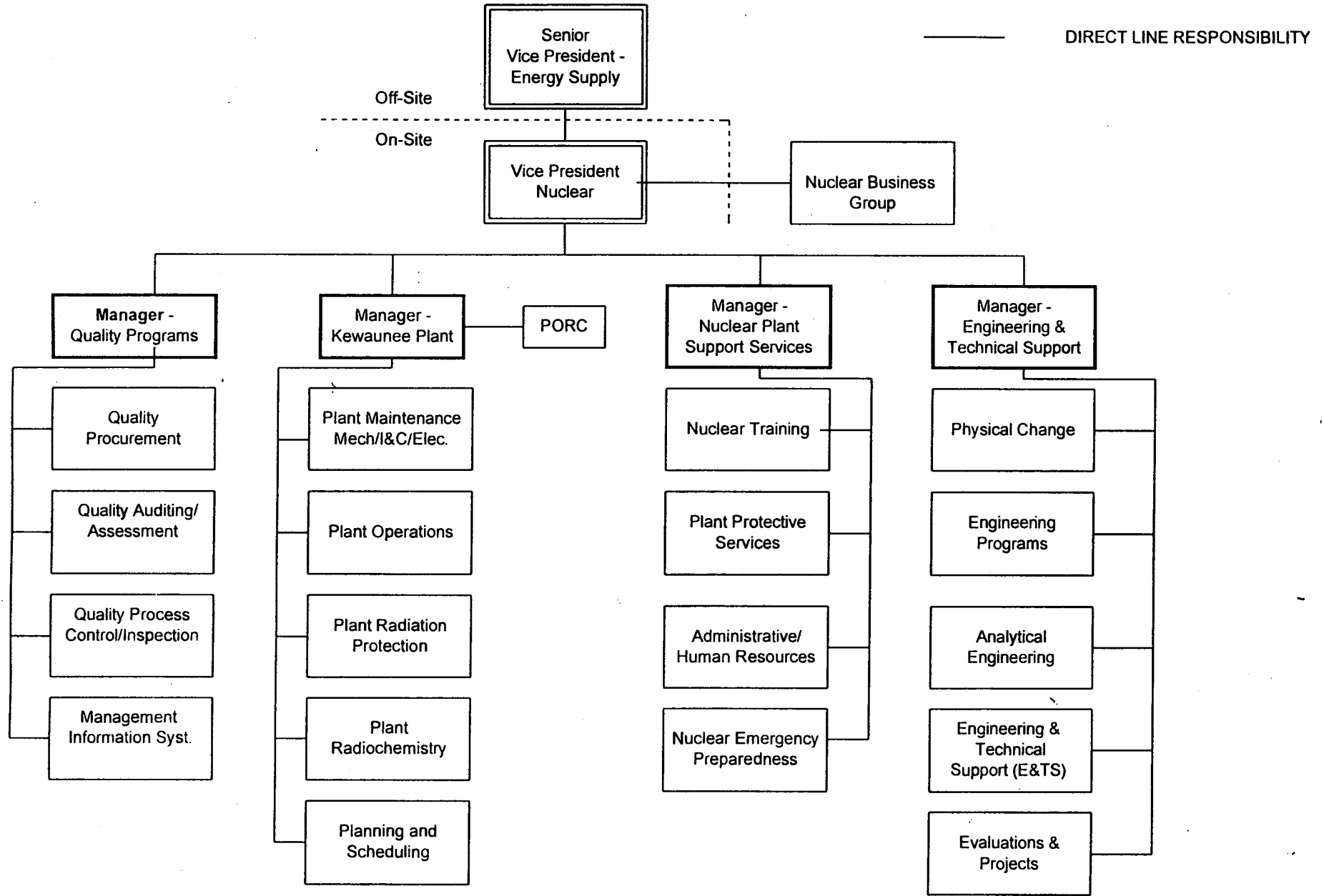


FIGURE 2  
ONSITE FUNCTIONAL QUALITY ASSURANCE ORGANIZATION



## INTRODUCTION

The policy of Wisconsin Public Service Corporation is to comply with the requirements of the Operational Quality Assurance Program (OQAP) which is authorized under the direction of the ~~Senior Vice President-Nuclear Power~~. The OQAP fulfills the requirements of 10CFR50 Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." Compliance with the OQAP is mandatory for applicable WPS Resources Corporation employees. Equivalent measures appropriate to the circumstance shall be enforced upon suppliers of materials, equipment or services.

The Operational Quality Assurance Program is established to define, implement and audit operation, maintenance, and modification activities related to nuclear plant safety. The OQAP complies with the provisions of ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants," with exceptions, interpretations, and qualifications noted in Appendix A of this description.

### 1.0 ORGANIZATION

#### 1.1 General Requirements

All members of the organization involved in operation of the Kewaunee Nuclear Power Plant (KNPP) shall be made aware of and recognize the necessity for well formulated and detailed administrative controls to assure safe and efficient operation. Lines of authority, responsibility and communication are established under the direction of the ~~Senior Vice President-Nuclear Power~~ and identify all levels of management involved in the OQAP, (See Figures 1 & 2). The quality assurance functions performed by each organizational element are cited in the descriptions below.

## 1.2 Duties and Responsibilities

### SENIOR VICE PRESIDENT- NUCLEAR POWER ENERGY SUPPLY

~~Under the authority of this position the Operational Quality Assurance Program is established. This position has corporate responsibility for all matters relating to the administration, engineering, design, manufacture, construction, installation, maintenance, modification, test, start-up, licensing, training programs, commercial operation and quality assurance of the Kewaunee Nuclear Power Plant. This position is responsible for final review and approval of changes to the Operational Quality Assurance Program. This position is also responsible for the Independent Technical Review Program; however, the Nuclear Safety Review and Audit Committee (NSRAC) reports directly to a Senior Company Officer.~~

This Position has responsibility for the generation, transmission, planning, and fuel procurement for all of Wisconsin Public Service Corporation. This position reports directly to the Chairman and Chief Executive Officer for nuclear responsibilities. This position has delegated specific authority and responsibilities as described below to the groups shown in Figures 1 and 2. The Nuclear Organization reports to the Senior Vice President – Energy Supply.

### SITE VICE PRESIDENT - KEWAUNEE PLANT NUCLEAR

~~This position is responsible for the activities associated with operation, maintenance, and modification of the Kewaunee Power Plant. Reporting to the Site Vice President (VP) is the Manager – Kewaunee Plant, Manager – Engineering and Technical Support, and Manager – Support Services.~~

This position has responsibility for all matters relating to the administration, engineering, design, manufacture, construction, installation, maintenance, modification, test, startup, licensing, commercial operation, and quality assurance of the Kewaunee Nuclear Power Plant. This position has delegated specific authority and responsibility to the groups

shown in figure 2. He maintains authority and responsibility for specific NRC correspondence such as 10CFR21 reports, license amendments and written correspondence signed under oath or affirmation in accordance with 10CFR50.54(f). This position is also responsible for the approval of the WPSC Operational Quality Assurance Program. Reporting to the Vice President – Nuclear, is the Manager – Kewaunee Plant, ~~who has been delegated the responsibility for the operation and maintenance of the plant; including the day to day and outage planning activities, chemistry activities, and radiological protection activities.~~, The Manager – Engineering & Technical Support, ~~reports to the Vice President – Nuclear, and has been delegated the responsibility for site engineering activities including; design basis documentation, the modification process, analytical processes, self assessment process, and NRC licensing interface.~~, The Manager – Support Services, ~~reports to the Vice President – Nuclear and has been delegated the responsibility for all nuclear training activities, security administration, access authorization, emergency planning, and general administrative support.~~ Also reporting to the Vice President – Nuclear is ~~and~~ the Manager – Quality Programs, ~~who is responsible for on-site quality programs, plant records and document control, and the implementation of the quality assurance program.~~ The Vice President – Nuclear is responsible for budgeting and record keeping associated with the previously identified activities and has delegated those respective responsibilities to the appropriate managers.

#### ~~VICE PRESIDENT – ENERGY SUPPLY~~

~~This position is responsible for procurement, management, and disposition of nuclear fuel and fuel materials and the implementation of the quality assurance requirements associated with these functions.~~

~~The Vice President – Energy Supply has delegated his authority and responsibility of Nuclear~~

~~Fuel Services to the Manager - Nuclear Fuel Services. Responsibility for reviewing and approving the directives which control the activities affecting quality performed by the Nuclear Fuel Cycle Group and the Nuclear Fuel Analysis Group, ensuring that the directives implement the requirements of the OQAP, and ensuring support is available for special projects involving the nuclear power plant has also been delegated to the Manager - Nuclear Fuel Services.~~

#### MANAGER - NUCLEAR FUEL

This position is responsible for procurement, management, and disposition of nuclear fuel and nuclear fuel materials and the implementation of the quality assurance requirements associated with these functions. The Manager - Nuclear Fuel has been delegated the responsibility for reviewing and approving the directives which control the activities affecting quality performed by the Nuclear Fuel Cycle Group and the Nuclear Fuel Analysis Group. The Manager - Nuclear Fuel is also responsible for ensuring that the directives implement the requirements of the OQAP, and ensuring support is available for special projects involving KNPP.

#### GENERAL MANAGER - TRANSMISSION

This position is responsible for substation and transmission activities and the implementation of the quality assurance requirements associated with these functions.

The Substation and Transmission Group is responsible for implementing the OQAP, as applicable, whenever their work involves KNPP.

MANAGER - CORPORATE SERVICES

This position is responsible for the implementation of the Operational Quality Assurance Program requirements associated with the activities affecting quality performed by the Purchasing and Stores ~~Department~~Group, ~~Power Plant Design & Construction~~GroupProject & Facility Services, and Information Technology Services involving KNPP and ensuring support is available for special projects involving KNPP.

A. Purchasing and Stores~~Department~~

The Purchasing and Stores ~~Department~~Group is responsible for providing support to procurement activities for KNPP.

B. ~~Power Plant Design & Construction~~Project & Facility Services

The ~~Power Plant Design & Construction~~Project & Facility Services Group is responsible for providing engineering and design support for KNPP, as requested.

They also have responsibility for preparation, review, revision and issue of appropriate directives which control engineering activities performed primarily by this group

## C. Information Technology Services

The Information Technology Services is responsible for providing for computer system support for KNPP.



### NUCLEAR BUSINESS GROUP

This group is responsible to the ~~Senior~~-Vice President - Nuclear ~~Power~~ for providing general support to the entire Nuclear Department in key business related areas, including budgeting and planning, development of strategic issues and plans, and purchasing. This group is also responsible for providing interface with the WPSC corporate departments and with external agencies such as the Joint Plant Operating Committee, the Public Service Commission of Wisconsin, and other regulatory and industry groups.

### MANAGER - KEWAUNEE PLANT

This position is responsible to the ~~Site~~-Vice President -- Nuclear - ~~Kewaunee Plant~~ for the safe and reliable operation and maintenance of the plant in accordance with the requirements of the OQAP. This position has the responsibility for the review, approval, and verification of implementation of nuclear administrative directives affecting quality for his areas of responsibility. These areas include maintenance, operations, instrument and control, radiation protection, radiochemistry, and planning and scheduling, as described below:

Plant Maintenance — ~~supply group activities~~, (Electrical/Mechanical/Instrument & Control) - is responsible for maintenance of plant equipment, ~~and~~ maintenance engineering activities and supply group activities.

Plant Operations — is responsible for plant operations including general supervision of all shift operating personnel.

Plant Radiation Protection — is responsible for radiation protection, plant health physics activities, and the Radiological Environmental Monitoring Program.

Plant Radiochemistry — is responsible for plant chemistry activities.

Planning and Scheduling — is responsible for plant outage coordination activities, administration of the work request system, and planning and scheduling for routine maintenance activities.

### MANAGER - ENGINEERING & TECHNICAL SUPPORT

~~This position is responsible to the Site Vice President — Nuclear Kewaunee Plant for the leadership and supervision of the Engineering and Technical Support group. The responsibilities of this position are centered around providing engineering support to the Kewaunee Nuclear Power Plant. The aspects of this support include, but are not limited to, the evaluation and implementation of physical changes to the plant, engineering evaluations of plant performance, licensing issues, licensing support (including interface with the NRC), administration and implementation of engineering programs, providing specialized analytical skills as needed to support the plant, providing engineering support on a plant systems basis.~~ This position is responsible for the leadership and supervision of the Engineering and Technical Support group. The responsibilities of this position are centered around providing engineering support to the Kewaunee Nuclear Power Plant. The aspects of this support include, but are not limited to, the evaluation and implementation of physical changes to the plant, engineering evaluations of plant performance, licensing issues, licensing support (including interface with the NRC), administration and implementation of engineering programs, providing specialized analytical skills as needed to support the plant, providing engineering support on a plant systems basis. This position has the responsibility for review, approval, and verification of implementation of nuclear administrative directives affecting quality for his area of responsibility. These areas are described below:

Physical Change - The physical change process is the method for implementing changes to the plant such as permanent plant modifications/changes, temporary plant modifications/changes, and procurement technical evaluations. This area is not permanently staffed, but rather, is a process supported by the engineering and technical support staff.

Engineering Programs - All program areas are responsible for providing the specialist for that program. The program specialist is responsible for the management of the program, program performance and implementation. Project teams will be created when appropriate by supplementing the program specialists with Engineering & Technical Support staff or other nuclear staff. Responsibilities of the specialist and team include interaction with customers, senior nuclear management, and external entities (e.g., NRC, INPO, etc.) as necessary. The program team has complete ownership of the program, i.e., responsibility and accountability for successful implementation of the program.

Examples of program areas are listed below:

NPRDS/Performance Reporting Program

ISI Program

Reactor Engineering Program

IST/Check Valve Program

Steam Generator Program

Licensing Program

STA Program

Heat Exchanger Performance Program

Turbine Program

Plant Systems Engineering and Technical Support (E&TS) Group - The ~~system~~ groups are responsible for providing the engineering and technical support for all plant processes, programs and systems. This includes supporting physical change, programs, projects, evaluations, maintenance of the USAR, Tech Specs, Tech Spec basis, system descriptions, drawings, specifications, procedures, Power Plant Facilities Information System (PPFIS), Material Components System (MCS), and QA typing documentation.

Multi-discipline or multi-department teams are employed to address the engineering needs of the plant, where necessary.

Analytical Engineering - This group is responsible for providing specialized or computer based analysis support to the various groups in the E&TS. Engineering support provided by Analytical Engineering includes Accident Analysis, Probabilistic Risk Assessment, Piping Support and Stress Analysis, Equipment Qualification, Electrical Distribution and Coordination, Set point Analysis, and Seismic Analysis/SQUG. Personnel assigned to this group are responsible for assuring their tools comply with the QA criteria for safety-related software, programmatic requirements, and commitments associated with their efforts.

Evaluations and Projects - The evaluations/projects process is a standard methodology for performing projects and evaluations. This area is not permanently staffed but is a process used by all engineering and technical support staff. Examples of existing evaluation processes that will be combined into this process are Operating Experience Assessments (OEA's), and Kewaunee Assessment Process (KAP), etc. The completion of the evaluation does not necessarily end the involvement in the activity. Should the evaluation lead to a physical change, or ongoing project, the team would be expected to continue involvement as required to ensure successful completion.

#### MANAGER - NUCLEAR PLANT SUPPORT SERVICES

This position is ~~responsible to the Site Vice President - Nuclear Kewaunee Plant for plant activities associated with nuclear training, plant protective services, administrative/human resources, and nuclear emergency preparedness. This position has the responsibility for review, approval, and verification of implementation of nuclear administrative directives affecting quality for his area of responsibility~~ responsible for

plant activities associated with Training, Plant Protective Services, Nuclear Emergency Preparedness, and Administrative/Human Resources. This position has the responsibility for review, approval, and verification of implementation of nuclear administrative directives affecting quality for his area of responsibility. Those areas of responsibility for the Manager -Nuclear Plant Support Services include:

Nuclear Training - Nuclear Training has been delegated the responsibility to develop, maintain, and provide employee training that meets the needs of the Kewaunee Nuclear Power Plant (KNPP) and supports the needs of Wisconsin Public Service Resources (WPSR). Nuclear Training is responsible for the accredited training programs as described in National Academy of Nuclear Training Document 91-016, The Process for Accreditation of Training in Nuclear Power Industry. Specific responsibilities and duties for the various training activities are defined in the appropriate directives and implementing procedures.

Plant Protective Services - is responsible for plant security and fitness for duty programs. Specific responsibilities and duties for the various protective services activities are defined in the appropriate directives and implementing procedures.

Administrative/Human Resources - is responsible for plant administrative activities and personnel issues. Specific responsibilities and duties for the various administrative/human resource activities are defined in the appropriate directives and implementing procedures.

Nuclear Emergency Preparedness - is responsible for the maintenance of an effective emergency preparedness program. Specific responsibilities and duties for the various nuclear emergency preparedness activities are defined in the appropriate directives and implementing procedures.

SUPERINTENDENT MANAGER-QUALITY PROGRAMS

This position is responsible to the ~~Senior Vice President-Nuclear Power~~ for ensuring that an Operational Quality Assurance Program (OQAP) is developed, implemented, and maintained to meet the licensing requirements and management objectives. This position is responsible for final review of changes to the OQAP and for final approval of changes to the implementing directives. This position is responsible for review of directives which control activities affecting quality. The ~~Superintendent~~ Manager-Quality Programs is independent of cost and scheduling considerations and has the authority and organizational freedom to identify quality problems, stop work on non-conforming activities associated with modifications (new construction) until deficiencies have been corrected; initiate, recommend or provide solutions, and verify implementation of corrective actions. The ~~Superintendent~~ Manager- Quality Programs maintains stop work authority for nonconforming activities associated with plant operations by reporting them to the ~~Senior Vice President-Nuclear Power~~. This position is responsible for ensuring that functions and activities of the Quality Programs Staff are controlled and performed in accordance with approved directives which implement the requirements of the OQAP. The Quality Programs Staff has the responsibility for verifying the effectiveness of plant quality activities. The Quality Programs Staff is comprised of:

Quality Process Control/Inspection - Field inspection activities, which includes but is not limited to, material receipt, QC hold points, NDE, and other activities normally associated with traditional quality control.

Quality Auditing/Assessment - Programmatic reviews and observations to determine program effectiveness and assessments normally associated with quality assurance auditing.

Quality Procurement - Review and evaluations of procurement activities, including but not limited to, purchase requisition documents, vendor and manufacturer evaluations.

~~Records Management~~ Management Information - Records Management - Its primarily responsible for receipt, maintenance, and overall control of records associated with the Kewaunee Nuclear Power Plant.

The ~~Superintendent~~ Manager - Quality Programs shall as a minimum meet the requirements of ANSI N18.1-1971 and should have a minimum of a B. S. degree in Science or Engineering from an accredited college or university, a minimum of five years experience in power plant construction, engineering and/or plant operation, and a familiarity with codes and regulations.

#### NUCLEAR SAFETY REVIEW AND AUDIT COMMITTEE (NSRAC)

NSRAC is responsible to a Senior Company Officer for review and audit of plant related matters concerning safety. The requirements for personnel, committee composition, meeting frequency, quorum and meeting records shall be as identified below and in accordance with the requirements of ~~the plant Technical Specifications and~~ the NSRAC Charter. The Committee periodically reviews the results of the Quality Programs Staff audits and is responsible for conducting reviews as part of the Independent Technical Review Program.

##### 1. Function

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

##### A. Nuclear Power Plant Operations

- B. Nuclear Engineering
- C. Chemistry and Radio-Chemistry
- D. Metallurgy
- E. Instrumentation
- F. Radiological Safety
- G. Mechanical and Electrical Engineering
- H. Quality Assurance Practices
- I. Other appropriate fields as determined by the Committee, to be associated with the unique characteristics of the nuclear power plant.

## 2. Composition

The NSRAC shall be composed of, but not necessarily limited to:

- A. At least three technically qualified persons who are not members of the plant staff.
- B. One member from the supervisory staff of the plant.
- C. At least two qualified non-company affiliated technical consultants.
- D. In-house staff management advisors as required.

The Committee membership and its Chairman and Vice Chairman shall be appointed by the Senior Company Officer to whom the NSRAC reports. Each member of the NSRAC shall have an academic degree in an engineering or physical science field; and in addition, shall have a minimum of five years technical experience, of which a minimum shall be in one or more areas given in paragraph 1., "Function".



3. Alternates

Alternate members shall be appointed by the NSRAC Chairman, upon approval by the Vice President - Nuclear, to serve on a temporary basis; however, no more than two alternates shall participate in NSRAC activities at any one time.

4. Consultants

Consultants may be utilized as determined by the Chairman - NSRAC to provide expert advice to the NSRAC.

5. Meeting Frequency

The NSRAC shall meet at least once every six months.

6. Quorum

A quorum of the NSRAC shall consist of the Chairman or Vice Chairman and four members including alternates. No more than a minority of the quorum shall have line responsibility for operation of the plant.

7. Review

The NSRAC shall review:

- A. Safety evaluations for 1) changes to procedures, equipment or systems and 2) tests or experiments completed under the provision of 10 CFR 50.59, 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 10 CFR 50.59.
- C. Proposed tests or experiments which involve an unreviewed safety question as defined in 10 CFR 50.59.
- D. Proposed changes in Technical Specifications or licenses.
- E. Reports covering violations of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance.
- F. Reports covering significant operating abnormalities or deviations from normal and expected performance of plant equipment that affect nuclear safety.
- G. Reports covering all REPORTABLE EVENTS.
- H. Reports covering any indication of an unanticipated deficiency in some aspect of design or operation of safety-related structures, systems, or components.
- I. Reports and meeting minutes of the PORC.

8. Audits

Audits of plant activities shall be performed under the cognizance of the NSRAC.

These audits shall include:

- A. Conformance of plant operation to the provisions contained within the Technical Specifications and applicable license conditions.
- B. Performance, training, and qualifications of the entire plant staff.
- C. Results of all actions taken to correct deficiencies occurring in plant equipment, structures, systems, or method of operation that affect nuclear safety.

- D. Performance of all activities required by the Quality Assurance Program to meet the criteria of Appendix "B", 10 CFR Part 50.
- E. The Plant Fire Protection Program, implementing procedures and the fire protection and loss prevention program.
- F. Any other area of plant operation considered appropriate by the NSRAC or the Senior Company Officer to whom the NSRAC reports.
- G. The Radiological Environmental Monitoring Program and the results thereof.
- H. The OFF-SITE DOSE CALCULATION MANUAL and implementing procedures.
- I. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes.

9. Authority

The NSRAC shall report to a Senior Company Officer and shall advise the Officer on those areas of responsibility specified in paragraph 7, "Review" and paragraph 8, "Audits".

10. Records

Records of NSRAC activities shall be prepared, approved and distributed as follows:

- A. Minutes of each NSRAC meeting forwarded to the Senior Company Officer to whom the NSRAC reports within 14 days following each meeting.

- B. Reports of reviews required by paragraphs 7.E through 7.H, forwarded to the Senior Company Officer to whom the NSRAC reports within 14 days following completion of the review.
- C. Reports of audits performed by NSRAC shall be forwarded to the Senior Company Officer to whom the NSRAC reports and to the management positions responsible for the areas audited within 30 days after completion of the audit.

#### PLANT OPERATIONS REVIEW COMMITTEE (PORC)

PORC is responsible to the Manager - Kewaunee Plant for providing advice on matters relating to nuclear safety at the plant. The requirements for personnel, committee composition, meeting frequency, quorum and meeting records shall be as identified below and ~~in accordance with the Technical Specifications and the~~ PORC Charter.

PORC is also responsible for conducting reviews as part of the Independent Technical Review Program.

#### 1. Function

The PORC shall function to advise the Manager - Kewaunee Plant on matters related to nuclear safety.

#### 2. Composition

The PORC shall be composed of key supervisors of the on-site staff from the following disciplines: Operations, Maintenance, Instrument and Control, Reactor Engineering, Quality, and Radiological.

3. Alternates

Alternate members shall be appointed in writing by the PORC Chairman to serve on a temporary basis; however, no more than two alternates for required members shall participate in PORC meetings at any one time.

4. Meeting Frequency

The PORC shall meet at least once per calendar month and as convened by the Chairman.

5. Quorum

A quorum of the PORC shall consist of the chairman (or his designated alternate) and a majority of the required members including temporary alternates.

6. Responsibilities

The PORC shall be responsible for:

- A. Review of operating, maintenance and other procedures including emergency operating procedures which affect nuclear safety as determined by the Manager - Kewaunee Plant. Changes to those procedures are made in accordance with the provisions of TS 6.8.a and TS 6.8.b.
- B. Review of all proposed tests and experiments that affect nuclear safety.
- C. Review of all proposed changes to the Technical Specifications.
- D. Review of all proposed changes or modifications to plant systems or equipment that affect nuclear safety.

- E. Review of all proposed changes to the Security Plan, Fire Plan, and their respective implementing procedures.
- F. Review all reports covering the investigation of all violations of the Technical Specifications and the recommendations to prevent recurrence.
- G. Review plant operations to detect potential safety hazards.
- H. Performance of special reviews and investigations and prepare reports thereon as requested by the Chairman of the Nuclear Safety Review and Audit Committee.
- I. Review of all REPORTABLE EVENTS
- J. Review of changes to the PROCESS CONTROL PROGRAM, the OFF-SITE DOSE CALCULATION MANUAL, and the RADIOLOGICAL ENVIRONMENTAL MONITORING MANUAL.

## 7. Authority

The PORC shall:

- A. Recommend to the Manager - Kewaunee Plant approval or disapproval of items considered under preceding paragraphs 6.A through 6.E.
- B. Make determinations with regard to whether or not each item considered under paragraph 6 constitutes an unreviewed safety question.
- C. Provide immediate notification in the form of draft meeting minutes to the Vice President - Nuclear and the Chairman - Nuclear Safety Review and Audit Committee of disagreement between the PORC and the Manager - Kewaunee Plant. The Manager - Kewaunee Plant shall have responsibility for resolution of such disagreements.

## 8. Records

Minutes shall be kept of all meetings of the PORC and copies shall be sent to the Vice President - Nuclear and the Chairman - Nuclear Safety Review and Audit Committee.

### QUALITY ASSURANCE TYPING COMMITTEE

This Committee is responsible to the Manager - Engineering & Technical Support for changes to classification of systems, structures and components within the nuclear power plant according to the importance of the function they serve with respect to plant safety and operability. The description of the committee's duties and authority shall be established in various directives and the QA Typing Committee Charter.

## 2.0 QUALITY ASSURANCE PROGRAM

### 2.1 General

The Operational Quality Assurance Program complies with the requirements of 10CFR50, Appendix B, the provisions of ANSI N18.7-1976 and the Regulatory Guides which endorse the daughter standards required by ANSI N18.7-1976 with the exceptions, interpretations, and qualifications noted in Appendix A of this description. The requirements of the OQAP apply to those activities which affect the quality of structures, systems or components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. All structures, systems, and components are classified as QA Type 1, 2, 3 or NA according to their function and importance in relation to the safe operation of the reactor, with emphasis on the degree of integrity required to protect the public. The OQAP requirements are mandatory for all

QA Type 1 items. QA Type 2 and 3 items, as determined by management, may require special control and an "X" modifier may be added to the QA2 or QA3 type designation. All components and/or systems which are identified as Safety Class I in the Updated Safety Analysis Report (USAR) shall be categorized as QA Type 1. All nuclear fuel and core components shall be categorized as QA Type 1. The definitions and a list of the Safety Class I, II and III structures, systems and components are found in the Kewaunee USAR Appendix B, Table B.2-1.

During construction, QA types were established for plant equipment by a QA typing committee. The QA types for equipment subsequently added to the plant are established by the Responsible Engineer who installs the equipment under the Plant Physical Change program. The Plant Physical Change program exists under the requirements of the OQAP. Therefore, the QA types of equipment added since construction are controlled under the OQAP and its definitions. A change to an established QA type must be approved by the QA Typing Committee.

## 2.2 Requirements

It is mandatory for applicable WPS Resources employees to comply with the OQAP. It is the responsibility of the management charged with the implementation of the program to inform personnel working for them that the quality policies, OQAP manual, and procedures have mandatory requirements which must be implemented and enforced. The Superintendent - Nuclear Training is responsible for conducting training sessions as necessary to keep individuals informed of policies and changes to the OQAP. The lesson plans for these training sessions will be prepared under the cognizance of the Quality Programs Staff.



The OQAP shall be applied to all activities affecting safety-related functions and include: physical changes, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, modifying, engineering, and training. The control over these activities shall be applied to an extent consistent with their importance to safety and shall take into account the need for special controls, processes, tests, equipment, tools, and skills to attain the required quality, and the need for verification of quality by inspection, evaluation, or test.

### 2.3 Structure

The OQAP manual is the top level quality program document for operational phase activities. The OQAP is a manual which incorporates the requirements of 10CFR50 Appendix B, the provisions of ANSI N18.7-1976 and ANSI N45.2.23-1978 and Regulatory Guides 1.8-Rev. 1, 1.30, 1.37, 1.38-Rev. 2, 1.39-Rev. 1, 1.54, 1.58-August, 1973, 1.64-Rev. 2, 1.74, 1.88-Rev. 2 and 1.94. The requirements and responsibilities identified by the manual are implemented through directives, procedures, and instructions which prescribe activities affecting quality. Technical reviews of directives are provided by department heads or process owners. Review of Nuclear Administrative Directives, and Fuel Management Directives for consistency with the OQAP is provided for by the ~~Superintendent~~ Manager- Quality Programs.

Nuclear administrative directives are reviewed and approved by the appropriate responsible individual (i.e., ~~Senior Vice President Nuclear Power, Site Vice President - Kewaunee Plant Nuclear, Manager - Nuclear Business Group~~, the Manager - Kewaunee Plant, Manager - Engineering & Technical Support, Manager - Nuclear Plant Support Services or ~~Superintendent~~ Manager- Quality Programs). These directives are prepared to govern activities affecting quality, such as physical changes, procurement, licensing, training, document control, operation, procedure control, material control, maintenance,

and other related activities.

Fuel Management Directives are reviewed and approved by the Manager - Nuclear Fuel Services and are prepared to govern fuel management activities affecting quality, such as fuel procurement, reactor core performance and analysis, core design, and other related activities.

#### 2.4 Management Review

Management above or outside the Quality Programs organization shall routinely be informed of the status and adequacy of the OQAP. Audits of implementing directives shall be conducted to verify conformance to the program. Nonconformances or differences of opinion which cannot be settled between QP and the department involved shall be brought to the attention of upper management for resolution.

#### 2.5 Indoctrination and Training

A training program shall be established in order to provide for developing and maintaining a staff qualified to operate, maintain and provide the necessary technical support. The indoctrination and training program shall provide for:

- A. Training personnel responsible for performing quality-affecting activities as to the purpose, scope and implementation of the quality-related manuals, instructions, and procedures.
- B. Establishing the scope and depth of indoctrination and training to be provided commensurate with the level of quality-affecting activities being performed by an individual.

- C. Training personnel who perform quality-affecting activities in the principles and techniques of the activity being performed.
- D. Training and retraining on an as-needed basis to maintain a level of quality commensurate with the quality-affecting activity being performed.
- E. Maintaining records of training sessions, attendance and content of the training session.

### 3.0 DESIGN CONTROL

Modifications to systems that are nuclear safety related, or as described in the USAR, and considered significant for nuclear safety shall be controlled by a Plant Physical Change Program established by directives to ensure compliance with the existing design and the requirements of 10CFR50.59. Directives shall be prepared to augment the following aspects of the Plant Physical Change Program:

- A. Establish the structure, authority and responsibilities of the groups or positions involved in design change activities.
- B. Correctly translate design inputs into specifications, drawings, procedures, or instructions.
- C. Identify and select the appropriate quality standards in design documents.
- D. Select and review the suitability of materials, parts, equipment and processes essential to the safety-related functions of the structure, system, or component.

- E. Assure that computer software, which is an integral part of the operation of equipment, is designed, documented and tested adequately.
- F. Assure the change is subject to at least the same measures applied to the original design, and provide for a second level review.
- G. Assign the responsibilities of all organizations involved in the Plant Physical Change process, both internal (KNPP) and external (contractor, vendor) and ensure a method of exchanging technical information across internal and external interfaces.

PORC shall be responsible for reviewing proposed changes or modifications that affect nuclear safety. NSRAC shall review the safety evaluation of changes completed under the provision of 10CFR50.59 to verify that such actions do not constitute an unreviewed safety question.

#### 4.0 PROCUREMENT DOCUMENT CONTROL

Measures shall be established in directives to provide for the preparation of procurement documents to ensure that applicable regulations, design bases, and other QA program requirements are included or referenced. Procurement documents shall include, as appropriate: the scope of work; technical requirements; documentation requirements; requirements for hold and witness points; the allowance for access to supplier's facilities for review or audit of documentation or manufacturing procedures; and requirements that the supplier has a documented QA program in accordance with 10CFR50, Appendix B which includes a means for disposition of nonconformances.

The directives shall include measures to ensure that procurement documents are reviewed and approved by qualified and authorized personnel prior to release. The directives shall also provide assurance that the procurement document review includes a verification that quality requirements

are stated in such a manner, that through either source surveillance and inspecting, supplier audits, or receipt inspection, the quality of the procured items may be verified.

#### 5.0 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

Measures shall be established in appropriate directives to control the preparation, format, content, and use of operating, test and maintenance procedures, and approvals for same. When required, they shall be prepared in sufficient detail to provide adequate guidance in performing activities affecting quality. These procedures shall include, as appropriate, initial conditions, step-by-step instructions, sign-off steps, acceptance criteria, etc., to ensure that activities affecting quality have been satisfactorily completed.

A Plant Physical Change Program shall be established by directives to assure that instructions, procedures, and drawings are used, where appropriate, to control activities associated with the modification of safety systems described in the USAR. These directives shall establish a method to update drawings, procedures, and other technical documents associated with the plant modification.

#### 6.0 DOCUMENT CONTROL

The generation, distribution, and revisions of documents that establish specifications or activities affecting quality shall be controlled by formal directives. These directives shall provide for the following document control measures:

- A. Identification of individuals or organizations responsible for preparing, reviewing, approving, and issuing documents and revisions, thereto.
- B. Identifying and providing the proper documents to be used in performing safety-related activities.

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- C. Establishing distribution.
- D. Establishing a method of providing up-to-date documents to the controlled files.

**7.0 CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES**

Suppliers of material, equipment and services, including suppliers of spare or replacement parts, shall be selected based on an evaluation of the supplier's capability to provide the purchased items or services in accordance with the requirements of the procurement documents. Directives shall include methods for source evaluation and selection. One or more of the following considerations shall be included for source evaluation: evaluation of the supplier's history of providing a product which performs satisfactorily in actual use; review of industry directories; review of whether the prospective supplier has a quality assurance program reviewed and inspected by the NRC under the Vendor Inspection Program; review of whether the prospective supplier has been recently audited by NUPIC (Nuclear Utilities Procurement Issues Committee) or similar third party inspection publication; review and evaluation of the supplier's Quality Assurance Program, Manual and Procedures, and the supplier's design and manufacturing capability; and a WPS survey of the prospective supplier's technical and quality capability by directly evaluating his facilities, personnel and the implementation of his quality assurance program.

A Qualified Suppliers System shall be established and maintained by directives developed under criteria imposed by the Operational Quality Assurance Program. Material, equipment, or services purchased from suppliers not on the Qualified Suppliers System shall undergo a review and evaluation to ensure conformance to the acceptable criteria established by the Quality Assurance Program. Directives shall also establish control measures to ensure that documentary evidence of the conformance of material and equipment to procurement requirements is available prior to installation or use.

## 8.0 IDENTIFICATION AND CONTROL OF MATERIALS, PARTS, AND COMPONENTS

Controls established for procurement shall ensure that safety-related materials, parts, and components are purchased under the requirements and documentation established by the Operational Quality Assurance Program. Implementing directives shall provide for a documented receipt and inspection of incoming material and equipment, along with providing a system for identifying the status of acceptable items to ensure use and installation of only correct and acceptable materials. Identification and traceability of safety-related materials, parts, or components from issuance to installation within the plant shall be provided by this system.

## 9.0 CONTROL OF SPECIAL PROCESSES

Special processes including welding and non-destructive examination shall be accomplished under controlled conditions by qualified personnel, in accordance with applicable codes, standards, specifications, criteria, and other special requirements. The Operational Quality Assurance Program is established to ensure compliance and implementation of these requirements.

## 10.0 INSPECTION

Concerning material receipt, directives shall establish a receipt inspection under the control of the ~~Superintendent~~-Manager- Quality Programs, which provides for visual examination, receipt of required documentation, verification of identification, and on-site technical inspection.

Concerning modifications, the Plant Physical Change Program provides for the following requirements: special processes, test, measuring and test equipment, and cleanliness. The work package shall be reviewed by site Quality Programs personnel who have been appropriately

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trained to ensure that the required special installation procedures are included in the package or properly referenced. Verification of conformance to established requirements shall be performed by individuals or groups who do not have direct responsibility for performing the work being verified. Personnel or groups assigned responsibility for verification of inspection or testing shall be delineated in appropriate procedures and directives.

Plant personnel performing inspection, examination, and testing functions which are associated with normal operations of the plant and certain technical reviews normally assigned to the on-site operations organization shall be qualified to ANSI N18.1-1971.

Plant personnel who will be performing inspection, examination, and testing functions which are not associated with normal operations of the plant shall be trained and qualified in accordance with the requirements of Regulatory Guide 1.58, "Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel", and 10CFR50.55a, Subsection g, "Inservice Inspection Requirements", which endorse, with specific exceptions, ANSI N45.2.6-1973, "Qualifications of Inspection, Examination and Testing Personnel for the Construction Phase of Nuclear Power Plants", except that QA experience cited for levels I, II, and III shall be interpreted to mean actual experience in carrying out the type of activity being performed. Quality Programs personnel will be qualified to these references with the noted exceptions. WPS non-plant personnel who perform plant inspections, examinations and testing shall be trained and qualified in accordance with the above stated paragraph.

Additionally, this also applies to contract personnel working under the WPSC OQAP. Suitable review and acceptance must be made for qualification to other revisions or other standards the contractor's program may specify.

Training of personnel performing activities affecting quality shall be conducted to ensure that suitable proficiency is achieved and maintained.



## 11.0 TEST CONTROL

A preoperational test program was conducted to demonstrate that structures, systems, and components would perform up to quality standards. A continuing operational test program is being conducted in accordance with Technical Specification surveillance requirements to ensure the operability of safeguard and safety-related structures, systems, and components. Plant directives and procedures shall provide for the prerequisites, evaluation, and documentation of these test results.

When required, the Work Request and Plant Physical Change Program shall provide for the testing and evaluation of test results for replacement, repaired, or modified structures, systems, or components.

## 12.0 CONTROL OF MEASURING AND TEST EQUIPMENT

Measuring and test equipment and reference standards (calibration standards) used for measurements, tests and calibration respectively, shall be of the proper range and type and shall be controlled, calibrated and adjusted, and maintained at specified intervals or prior to use to assure the necessary accuracy of calibrated devices. The referenced standards used shall have an accuracy range and stability which are adequate to verify that the equipment being calibrated is within required tolerance. The reference standards used shall be adequate for the requirements of the equipment being calibrated, shall be recertified against higher level equipment of closer tolerance, and shall be traceable to nationally recognized standards. The method and interval of calibration for measuring and test equipment and reference standards shall be specified and shall be based on the type of equipment, its characteristics and other conditions affecting calibration. When measuring and testing equipment or reference standards are found to be out of calibration, an evaluation shall be made of previous inspections and test results and acceptability of the items previously inspected.

### 13.0 HANDLING, STORAGE, AND SHIPPING

Nuclear administrative directives shall provide a system for material and equipment handled at and shipped from the plant to prevent damage, deterioration or loss. Where necessary, for sensitive or high value items, specific written instructions or procedures will be utilized. Where necessary, special handling tools and equipment will be utilized.

Directives shall provide for special provisions for the control of items which might cause risk to the general public if damage should occur.

Directives shall also provide a system for controlling material during storage to prevent damage, loss, deterioration, or environmental damage. Housekeeping practices shall be controlled to prevent degradation in item quality.

### 14.0 INSPECTION, TEST, AND OPERATING STATUS

The measures required in this criteria are applied to two general categories, material control and operational control. Inspection, test, and operating status provided by the material control program is implemented through plant directives which are controlled by the Quality Programs organization. Operational control, including the status of inspections, tests, and operations activities is described in plant directives which are controlled by the Operations and Planning and Scheduling organizations. All changes in procedures for these categories are reviewed by management. If the need for bypassing of a required inspection, test, or other critical operation occurs, it shall be procedurally controlled and reviewed by management.

#### 14.1 Material Control

A receipt inspection at the plant site shall identify the status of acceptable items and shall provide for the control of uninspected and nonconforming items to ensure use and installation of only correct and acceptable materials. Physical identification shall be used to the maximum extent possible to identify the status of materials inspected. The system shall provide for documentation traceable to the item and segregation and disposition of nonconforming items to preclude misuse.

#### 14.2 Operational Control

The work control program shall include provisions for taking equipment out of service, identification of that equipment, and precautions or prerequisites for returning that equipment to service. The work request and supplemental documents shall be reviewed by Quality Programs personnel to ensure that special processes, inspection (hold and witness points) and testing requirements are adequately specified. They are also reviewed by operations personnel to determine the effect on plant operations, the proper tagging out of service of equipment, and the protection of personnel and equipment.

#### 15.0 NONCONFORMING MATERIALS, PARTS, OR COMPONENTS

When a nonconforming item is identified during a receipt inspection, the condition shall be documented on a Material Nonconformance Report and the item identified or segregated to preclude misuse, further processing, or installation pending disposition. Material Nonconformance Reports will be controlled and evaluated by cognizant plant personnel for the determination of the disposition of nonconforming items. Material Nonconformance Reports and dispositions shall be submitted to the responsible organization for implementation of corrective action. Provisions shall be established to ensure that items dispositioned as "repair" or

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"rework" shall be reinspected and require documentation verifying the acceptability of the item prior to release for use.

## 16.0 CORRECTIVE ACTION

Conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective materials and equipment (post-receipt inspection), and nonconformances shall be identified on by Quality Assessment Reports and/or Kewaunee Assessment Process (KAP) forms. These reports provide the mechanism for all personnel to notify management of conditions adverse to quality. Measures shall be provided for the prompt processing of these reports to ensure expeditious investigation, evaluation, and implementation of corrective action. For situations determined to be significantly adverse to quality, investigations shall not only provide for identifying and correcting the condition, but also for determining the cause of the condition to ensure that corrective action is taken to preclude its recurrence.

Measures shall be established to ensure that KAP forms are promptly prepared and reviewed for events which may be potentially reportable to the NRC. The KAP form shall be evaluated by management for safety implications and Technical Specifications violations. The system shall provide for determination of corrective action to be taken, implementation of the corrective action, and final close out of the KAP form.

Measures shall be established in appropriate directives and Quality Procedures to control audit findings. These measures shall include a description of the unacceptable condition, corrective action to be taken, response time, verification of implementation of appropriate corrective action, and close out of the deficiency generated as a result of audits. These findings shall be documented on the Quality Assessment Report (QAR) and / or KAP form. Corrective action taken for audit findings shall be reviewed and verified. Disagreement between Quality Programs and the audited organization regarding corrective action shall be pursued through responsible

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management with the final authority resting with the ~~Senior Vice President-Nuclear Power~~.

Technical deficiencies and recommendations generated during technical reviews shall be documented with the report. Technical deficiencies and recommendations shall be submitted to the appropriate Nuclear Power Production Organization Manager for disposition as deemed necessary.

#### 17.0 QUALITY ASSURANCE RECORDS

Directives shall be prepared to control records that are generated during the operation of the Kewaunee Nuclear Power Plant. These directives shall identify the types of records that are to be controlled including requirements for storage.

Records shall be primarily maintained in the KNPP QA Vault, the main records storage facility. Frequently used records, not stored in the KNPP QA Vault shall be maintained in accordance with procedures which provide for proper control and protection of the records. Records may be maintained using microfilm, optical disk, or other approved technology provided appropriate quality control provisions have been established in the controlling procedures.

Records shall be kept for the prescribed periods of time in accordance with the requirements of Technical Specifications or Regulations. Directives shall provide for a system that permits the retrieval of information in a reasonable amount of time.

## 18.0 AUDITS

Audits shall be conducted in accordance with appropriate directives, procedures, or instructions to verify that the requirements of the QA program are being implemented. Audits shall be conducted on, but not limited to, power plant operating and maintenance activities, engineering staff activities, Fuel Management activities, Purchasing Department activities, and Supplier activities. A comprehensive system of planned and documented audits shall be carried out to verify compliance with all aspects of the administrative controls and quality assurance program. Audits of selected aspects of operational phase activities shall be performed with a frequency commensurate with their 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 years. A quality assurance program has been developed to cover the auditable portions of the Technical Specifications over a five year interval.<sup>1,2</sup> Audits shall be performed by experienced personnel trained, in accordance with ANSI N45.2.23-1978, and independent of any direct responsibility of the activity being audited.

Preparation of procedures for audits, documentation of audit findings, and issuance of audit reports shall be described by applicable directives or procedures. Supervisory personnel of the audited activity shall review the audit report and provide corrective actions. Follow-up action shall be provided for by the OQAP to ensure that corrective action is implemented and adequate.

<sup>1</sup> Letter from C. W. Giesler (WPSC) to J. F. Streeter (NRC) dated August 22, 1983.

<sup>2</sup> Letter from R. L. Spessard (NRC) to C. W. Giesler (WPSC) dated September 30, 1983.

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APPENDIX A ANSI N18.7-1976 EXCEPTIONS, INTERPRETATIONS, QUALIFICATIONS  
GENERAL

ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants" is adopted to provide a basis for establishing an operational quality assurance program that meets the requirements of 10CFR50 Appendix B. This standard provides an acceptable means to satisfy the criteria of 10CFR50 Appendix B, but does not limit the use of alternate means to ensure safe operation of the plant. In this regard, those portions of this standard to which exceptions, interpretations and/or qualifications are taken are listed below.

Standards in general present objectives to be met with the method of implementation left general enough to provide for various interpretations for implementation. In the review of the program in accordance with the adoption of these new standards, many changes in implementation have been made. Where questions of interpretation were raised a conscientious interpretation has been formalized with the QP staff. Wherever future questions of interpretation arise they will be decided in a similar manner with continued disagreement being brought before corporate management for resolution.

When a short term or one time contradiction to the program is discovered, a non-conformance action will be taken within the QP organization to ensure a conscientious effort to maintain a quality level equivalent to the safety significance of the activity involved. When a long term or permanent contradiction to the program exists, a program change shall be implemented providing the same level of review as the adoption of this program, and the change will be submitted to the NRC.

Finally, wherever Technical Specifications overlap or contend with the administrative controls provided for in this program, the Technical Specifications will take precedence.

PARTICULAR EXCEPTIONS AND QUALIFICATIONS

ANSI N18.7-1976

## Section

3.1 Administrative controls shall be established necessary to comply with this standard as adopted, with the exceptions, interpretations, and qualifications addressed in this transmittal.

5.2.7.2 This paragraph requires that design activities associated with modification of safety-related structures, systems, and components shall be accomplished in accordance with ANSI N45.2.11-1974. We will commit to apply this standard to those design activities which we deem are comparable in nature and extent to similar construction related activities, the provisions of which shall be employed as applicable to the degree of importance to safety for the design project under consideration. We shall also adopt the Regulatory Position of Regulatory Guide 1.64, Rev. 2, June 1976, as requested with an exception to position C.2. We will follow our existing practice that design verification should not be performed by the originator's supervisor, except where expertise is not available other than the supervisor immediately responsible for the design.

5.2.9 This section requires that procedures be developed to supplement features and physical barriers designed to control access to the plant and, as appropriate, to vital areas within the plant. Plant security and visitor control measures are implemented in accordance with the Kewaunee Security Manual, required by 10 CFR 50.34(c).

5.2.12 This section specifies that ANSI N45.2.9-1974, "Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants", shall be used for management of plant records during the operational phase. Compliance with the provisions of this standard and the Regulatory Position of Regulatory Guide 1.88, Rev. 2, October 1976,



shall be deemed applicable to the nature and scope of the work being performed and the importance of the item or service involved with the exceptions noted below.

5.2.15 This section requires that plant procedures which govern safety-related activities shall be reviewed by an individual knowledgeable in the area affected by the procedure no less frequently than every two years to determine if changes are necessary or desirable.

WPSC has alternate programs in place that make a biennial review process unnecessarily duplicative. These alternate programs ensure procedures are periodically reviewed and maintained current when pertinent source material is revised, plant physical changes are made, and/or any deficiencies occur. WPSC will also implement measures specifying that infrequently scheduled plant procedures that have not been used or reviewed for two years should be reviewed before use. Due to the significance of the Integrated Plant Emergency Operating Procedures (IPEOP's), the biennial review of the IPEOP's will be continued.

Alternate programs in place include the following:

1. Technical Specification revision process

This process includes a review of affected plant procedures upon the approval of a Technical Specification Amendment and subsequent revisions as appropriate.

2. Physical Change Program

Nuclear department heads are notified of modifications and are requested to review affected plant procedures. Revisions to procedures are verified as part of the Physical Change closeout process.

3. Various Self-Assessment Programs

During self-assessment activities, procedures may be identified that contain significant discrepancies. Revisions are made as appropriate.

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4. Kewaunee Assessment Process (KAP)

Any procedures identified as being in need of revision during the KAP evaluation process are revised before the KAP corrective action is closed out.

5. Quality Assurance Program

At least every two years, a surveillance will be performed whereby randomly selected safety-related procedures would be checked for added assurance of timely revision of procedures.

6. Operating Experience Assessment Program

During operating experience assessment activities, procedures may be identified that contain significant discrepancies or require change. Revisions are made as appropriate. Significant changes to vendor manuals are evaluated as part of this program.

ANSI N45.2.9-1974

Section

4.3 & 4.4                      Concerning Receipt Control.

The Records Management Group has been designated as the group responsible for receiving and storing records. This staff does not control which records are sent to them, however, there is a record index system identifying which records are under the control of the QA Program. We have assigned responsibility for assuring QA records are retained in the KNPP QA Vault to the various department heads or process owners. Also there is no log of incoming records.

However, the previously-mentioned index is kept up to date and serves as a list of records received and retained. We have a procedure which partially covers the receipt control of records but none specifically for this action. We do not plan at this time to implement any further controls on the receipt of records.

ANSI N45.2.9-1974

Section

5.6 Concerning Permanent and Temporary Storage Facilities.

Criteria specified in this paragraph for those records stored in the KNPP QA Vault are met; however, the use of temporary storage facilities, the definition of a working QA document and the transport of QA records to the vault differ.

Several in-house generated QA documents/records are maintained in working files, e.g., NSRAC Meeting Minutes, training records and radiological survey data. These documents/records which we feel are working documents until no longer used on a routine basis are kept in locked, fire-proof file cabinets and are periodically transferred to the KNPP QA Vault. Duplication or filing in the vault would be unacceptable due to the quantity and frequent use of these documents.

We find our handling of these documents acceptable due to the relative short duration of filing in temporary quarters and relative insensitivity of these documents to the safety of the plant.

Finally, we do not have a courier service to immediately transfer a QA record just completed to the vault. Some records are transferred by personal delivery and others through the routine in-company mail service. At this time we do not plan to implement any further controls on transferring documents to the KNPP QA Vault.

FIGURE 1  
OFFSITE FUNCTIONAL QUALITY ASSURANCE ORGANIZATION

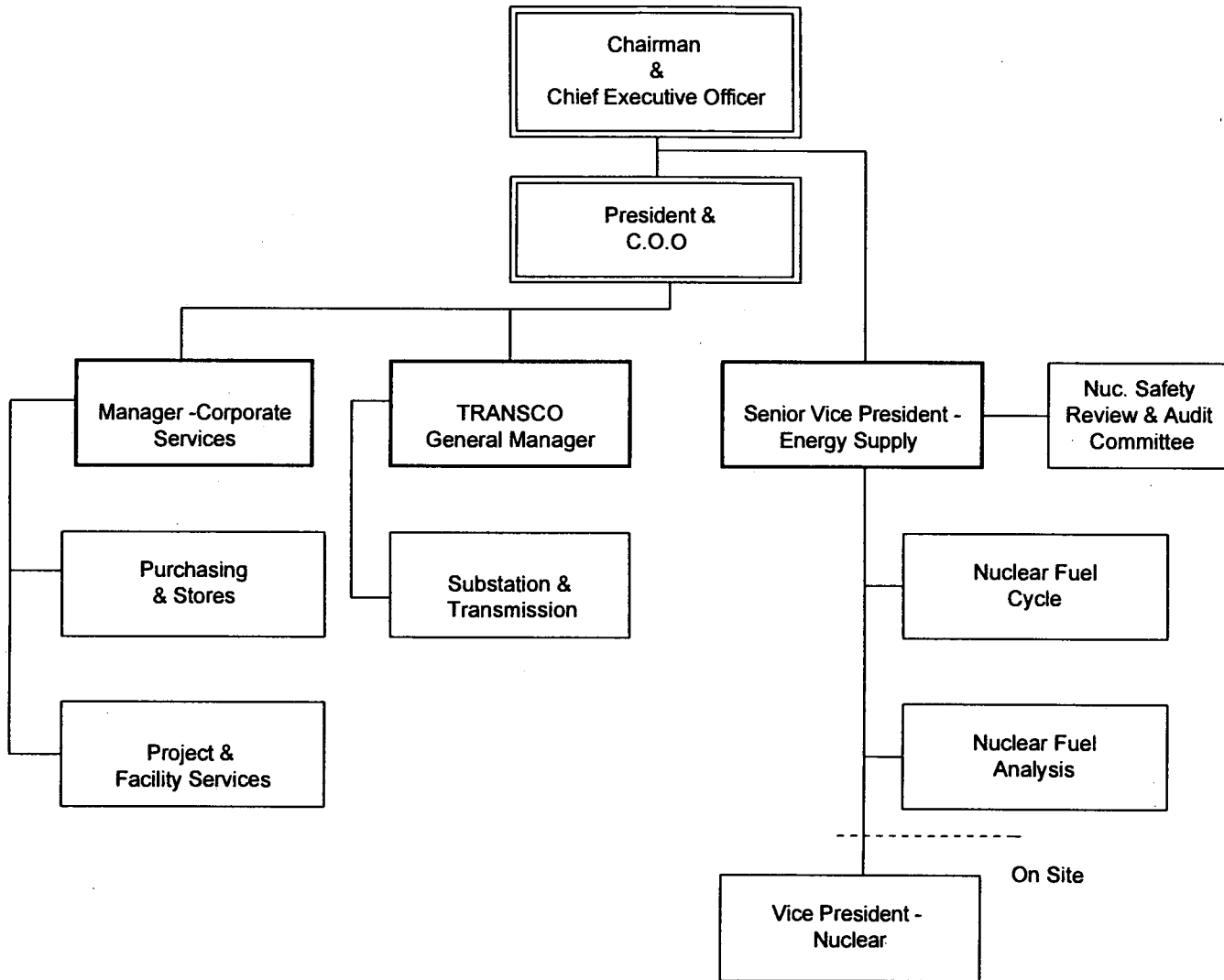


FIGURE 2  
ONSITE FUNCTIONAL QUALITY ASSURANCE ORGANIZATION

