QUALITY ASSURANCE

MANUAL

OPERATIONS

ARKANSAS POWER & LIGHT

HELPING BUILD ARKANSAS

APL-TOP 1
REVISION 4

QUALITY ASSURANCE MANUAL

OPERATIONS

PROPOSED REVISION 4

SUMMARY

PARA. REVISED	REVISION	COMMENTS
Policy	Eliminate Quality Assurance Committee (QAC)	AP&L has developed sufficient management and staff ability in Quality Assurance to devise and implement an acceptable quality assurance program without the QAC.
Foreword	Eliminate QAC	
1.2	QA General Audit reports replace QAC meeting minutes.	
1.4	1. Delete "implementation and"	1. Manager of QA does not implement all details of the program.
	2. Eliminate QAC	
1.4.1	1. Delete "administratively"	1. QA manager will report both administratively and technically to the Assistant Director of Power Production.
	2. Corrected manual title	
	3. Delete technical direction from QAC.	3. Same as 1.
1.4.1.1.1	Itemized QA manager responsibilities. Added responsibilities 6 & 7.	Responsibilities 6 & 7 were previously performed by the QAC.
1.4.1.2	Revised to cover QA supervisors. Consolidated responsibilities of QA personnel for construction, operations, engineering and audits.	

PARA. REVISED	REVISION	COMMENTS
1.4.1.3	Added "or designated QAE or QA Supervisor."	The Manager of QA usually assigns inspectors to a specific engineer or supervisor.
1.4.2.2	Updated duties to include Technical Specifications requirements.	
1.4.3	Revised to delete Plant Supt. authority to make design changes & modification.	Design changes and modifications to Q-list items require offsite as well as plant activity
1.4.5	Title change.	
1.4.7.1	Deleted.	The Manager of Transmission Systems was included because of QAC membership.
1.4.7.2	Deleted.	The Manager of Installation and Testing was included because of QAC membership.
1.6	QAC deleted (was para. 1.6.1).	Responsibilities assigned to the QAC have been reassigned as follows: 1. Assistant Director of Power Production 2. Manager of Quality Assurance and Assistant Director of Power Production 3. Manager of Quality Assurance 4. Manager of Quality Assurance 5. Manager of Licensing 6. Manager of Quality Assurance
1.6.1	Paragraph number change.	
1.6.1.1	Paragraph number change and delete ANO Health Physics Supervisor.	
1.6.1.2	1. Paragraph number change. 2. Add "and audit"	2. To agree with Technical Specifications.

PARA. REVISED	REVISION	COMMENTS
1.6.1.3	1. Paragraph number change. 2. Change "twice a year" to "once per 6 months."	2. Changed to agree with Technical Specifications.
1.6.1.4	Paragraph number change.	
1.6.1.5	1. Paragraph number change 2. Sentence changed to define areas of responsibility	2. Changed to agree with Technical Specifications.
1.6.1.6 thru 1.6.2.5	Paragraph number change.	
1.6.2.5.1)	Responsibility reworded.	Changed to agree with Technical Specifications.
1.6.2.6 thru 1.6.3	Paragraph number change.	
Figure 1-3	Revised to delete QAC and GO Engineering Sections. Corrected Nuclear Services Organization. New title for Chief Chemist.	
2.3.2	1. Corrected manual title. 2. Deleted QAC. 3. Manager of QA and Asst. Director of Power Production to approve QA program.	
2.5.1	Program to be approved by Manager of Quality Assurance and Assistant Director of Power Production. Cognizant managers to review prior to approval.	
2.8.2	QAE changed to QA personnel.	Assignment may be to a Quality Assurance Supervisor or Inspector.

PARA. REVISED	REVISION	COMMENTS
2.8.3	Deleted	AP&L management has sufficient experience in QA to make this assessment.
Table 2-1	1. Deleted procedures not referrenced in the manual.	
	2. Added procedure ANO-15.	2. This procedure will implement paragraph 4.2.2.3.
	3. Corrected title.	
Table 2-2	Deleted procedures not referenced in the manual.	
Table 2-3	Deleted procedures not referenced in the manual.	
4.2.2	1. Restated vendor approval methods 1 & 2.	
	2. Added method 3 to permit qualifications of vendors based on evaluation of documented information by the QA section.	2. This method follows the recommendation of ANSI N45.2.13 paragraph 4.2 a&b.
	3. Added method 4 to permit qualification of vendors for inkind or off-the-shelf replacement parts.	3. This method provides a means of qualifying a vendor for spare parts without verification of a full 10CFR50 Appendix B type program. It is a practical solution to problems previously encountered when trying to make small dollar value purchases for replacement parts.
4.2.3	Added "procured by the plant staff."	The QCE is a member of the plant staff & reviews safety related purchases.
4.3.2	Changed Production Department to Nuclear Services Section.	
5.3.1	Changed Shift Supervisor to Senior License Holder.	Changed to agree with Technical Specifications.
5.3.2	Changed to require PSC review & approval prior to implementation.	Changed to agree with Technical Specifications.
5.3.3	Deleted	Sufficient controls are detailed in the Technical Specifications.

PARA. REVISED	REVISION	COMMENTS
5.4	Deleted.	Emergencies are handled by temporary changes as described in paragraphs 5.3.1 & 5.3.2.
7.2.2	Reference made to paragraph 4.2.2.	
7.5(2)	Instruments corrected to instructions (typo).	
7.5(4)	Added "when practical."	Segregation of nonconforming items is not always possible.
9.2.3	QAE changed to QA personnel.	
9.3.1	1. Deleted soldering from item 2.	1. Soldering is not used in structural or pressure boundary applications and is not considered a special process.
	2. Deleted items 7 and 8.	2. Radiological analysis and contamination control and chemical analysis are not considered special processes requiring personnel qualification programs. Both of these processes are covered by plant procedures.
10.2.3	Reworded for clarification.	Original wording could be interpreted to require review of all inspection records.
10.4.1	Revised to require 1 and 2 or 3.	If paragraphs 1, 2, and 3 are required then QA personnel could not be qualified because procedure 1004.20 applies only to ANO Plant Staff.
11.5.2	New Paragraph.	This paragraph describes pre-operational activity after issue of an operating license.
11.5.3	Paragraph number change.	
15.2.2.2	Last sentence of paragraph 15.2.2.1 separated for clarity.	
15.2.3	Identified nonconformance procedure.	

PARA. REVISED	REVISION	COMMENTS
16.3.2	QAE changed to QA personnel.	
17.2.3	QAE changed to QA personnel.	
17.4.1	Added "other than Plant Staff" for better identification.	
17.4.2	Deleted	Covered by 17.2.2 & 17.3.3
17.4.3	Deleted	Covered by 17.2.2 & 17.3.3
17.5.2	Changed "within" to "without".	Typographical error.
18.5.1.2	1. Added paragraph number. 2. Added description of handling of audits conducted within the AP&L organization.	

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ARKANSAS POWER & LIGHT COMPANY POLICY STATEMENT

QUALITY ASSURANCE PROGRAM FOR OPERATION

It is the policy of the Arkansas Power & Light Company (AP&L), from the highest level of corporate management, that its Quality Assurance Program for Operation shall meet the requirements of the Code of Federal Regulations, 10 CFR 50, Appendix B, with respect to operation, maintenance, refueling, repair and modifications, and inservice inspection of AP&L Nuclear Plants. The Program shall, in addition, comply with WASH 1283, 5/24/74; WASH 1284, 10/26/73; and WASH 1309, 5/10/74; and be responsive to Industrial Standards and Codes which pertain to the structure of the Program and the implementation of its procedures.

Under the Program, the Senior Vice President, Production, Transmission and Engineering, is the final management authority responsible for assuring that this policy statement and the Quality Assurance Program are implemented within AP&L. The Plant Superintendent and the Plant Quality Control Engineer are responsible for the daily implementation of the Program's procedural requirements at the plant. Each Production Department Manager (Manager, Nuclear Projects, Manager, Licensing, Manager, Nuclear Fuel, etc.) is responsible for the procedural implementation of the program within his assigned area.

The Manager of Quality Assurance shall be responsible for establishing the Program. The Manager of Quality Assurance and the Assistant Director of Power Production shall also be responsible for approval of the program.

Quality Assurance personnel reporting to the Manager of Quality Assurance shall be responsible for auditing the Program as necessary and monitoring all activities required by the Program to assure compliance with its requirements. The Plant Quality Control Engineer shall have the authority and organizational freedom necessary to meet the requirements of 10 CFR 50, Appendix B.

The Manager of Quality Assurance shall provide for annual review of the adequacy and overall effectiveness of the Program. Any defects in the implementation of either this policy or the Program that are revealed during the review, and that require action for correction, will be reported to appropriate levels of management together with appropriate recommendations.

Implementation of this policy is necessary in order to achieve the reliability and safety required at our Nuclear Plants. Each person involved in activities concerning our Nuclear Plants shall be responsible for assuring quality in his own work, and for compliance with the requirements of the Program. The Quality Assurance Program policies, manuals, and procedures are mandatory requirements which must be implemented and enforced by all responsible organizations and individuals.

J. D. Phillips

J. D. Phillips
Senior Vice President
Production, Transmission & Engineering
Dated: _____

FOREWORD

Quality assurance requirements have been established for the design and construction of AP&L Nuclear Plants to assure that regulatory requirements and licensing commitments, codes and standards are correctly translated into the as-built plant. It is the objective of this program to establish quality assurance requirements to ensure that activities such as operating, testing, refueling, repairing, maintaining and modifying the Plant are conducted in accordance with good engineering practices. To meet this objective, a Quality Assurance Program for Operation applicable to AP&L Nuclear Plants has been established by Arkansas Power & Light Company. The Program, identified as the Quality Assurance Program for Operations, provides quality criteria to be applied to the operational phase of the plant. It has been written to comply with Title 10, Code of Federal Regulations, Part 50, Appendix B (10 CFR 50, Appendix B), WASH 1283, 5/24/74; WASH 1284, 10/26/73; and WASH 1309, 5/10/74. The Program controls those phases, as applicable, for the design, procurement, manufacturing and fabrication, installation, repair, maintenance or changes made to existing plant structures, components and systems that prevent or mitigate the consequences of a postulated accident which may cause undue risk to the health and safety of the public. It assures that the necessary operational safeguards are applied in accordance with the criteria for safe, efficient, and reliable operation. The Program is an outgrowth of the principle that quality assurance emanates from each individual contributor, and that management is responsible for creating an awareness of quality and reliability.

*1 *410.3 *410.4 2 *410.25 *1 * *410.9

AP&L's initial Quality Assurance Program was formalized on March 10, 1971, with the initial issue of AP&L's Quality Assurance Manual. The program was revised and upgraded seven times (12/17/71, 4/5/72, 8/22/72, 2/6/73, 6/5/73, 12/4/73, 3/26/74), and on 6/11/74, the Quality Assurance Program for Operations was described in a manual separate from the construction program.

* * * *1 *410.3 *410.4 *

Quality Assurance Program changes are made as required by the Manager of Quality Assurance to implement additional or changed requirements. *4

The Quality Program is implemented through quality assurance procedures contained in the following manuals. *

* Quality Assurance Procedures Manual *
* Quality Assurance Administrative Procedures Manual *
* Nuclear Services Procedures Manual *
* ANO Master Plant Manual - Quality Control Procedures *

*

All procedures contained in these manuals which are identified in this program are reviewed and approved as described in paragraph 2.4.3. The procedures are developed and revised as necessary by the cognizant group. The procedures and revisions are examined by the Manager of Quality Assurance to assure that Quality Assurance Program commitments are met. * *2 *410.24 *

RECORD OF REVISIONS

REVISION NUMBER	DESCRIPTION	DATE
0	Initial Issue	6/11/74
1	Response to AEC Questions Submitted 11/21/74. Revisions to Section 2, 4, and 7 as indicated.	12/13/74
2	Response to NRC Questions Submitted 2/7/75. Procedure Numbers 1005.xx changes to 1004.xx (Number Change Only)	3/4/75
3	General revision to change AEC to NRC, update organization, reflect NSP revisions, minor program implementation changes.	9/8/76
4	Eliminate Quality Assurance Committee Changes to Procurement Control - Qualification of Vendors. Organizational Changes. Incorporate Technical Specification Changes.	

1. ORGANIZATION

1.1 SCOPE

This section defines lines of responsibility and describes the organizational structure for the quality assurance functions required for the safe and reliable operation, maintenance, and modification of AP&L Nuclear Plants.

1.2 ARKANSAS POWER & LIGHT COMPANY (AP&L)

The AP&L Corporate Organization relevant to the operation of nuclear plants is depicted in Figure 1.1.

The ultimate responsibility for all power production facilities within AP&L, including Quality Assurance, lies with the Senior Vice President, Production, Transmission and Engineering. He provides management assessment of the Quality Program through review of Quality Assurance General Audit (ANO-14) reports and reports of NRC activities. Functioning under the Senior Vice President, Production, Transmission and Engineering and providing line control over power plant operation is the General Office-Production Department headed by the Director of Power Production. *410.2 *4 *4

The Vice President, Financial Services, shall be responsible for the purchasing functions affecting Plant operation as described in Subsection 1.3.2. *3

1.3 ADMINISTRATIVE SERVICES

The Administrative Services Organization (Figure 1-2), provides purchasing services and overall personnel safety control requirements in support of the operation of AP&L Nuclear Plants. The duties of individuals performing key functions related to the quality of the activities involved are as follows:

1.3.1 Manager of Safety

The Manager of Safety reports to the Director of Personnel and shall be responsible for the following quality-related duties and activities:

1) Serves as a member of the Safety Review Committee

2) Establishes the corporate safety policies

3) Publishes the Corporate Safety Manual

4) Is responsible for AP&L implementation of OSHA requirements

5) Inspects AP&L facilities for compliance with the Corporate Safety Manual.

1.3.2 Supervisor of Purchasing

The Supervisor of Purchasing reports to the Manager, Purchasing and Stores, and shall be responsible for the following quality-related duties and activities:

1) Prepares purchase orders based upon receipt of reviewed and approved purchase requisitions.

2) Performs the commercial interface functions between AP&L and contractors or vendors.

3) Assures that quality documentation prepared by Plant or Production Department personnel are included in purchasing documents.

1.4 PRODUCTION DEPARTMENT

The Production Department, headed by the Director of Power Production, shall be responsible for all activities related to the operation of AP&L Nuclear Plants. These activities include design, procurement, modification, maintenance, and operation. Within the Power Production Department, coordination of the Quality Assurance Program shall be accomplished by the Manager of Quality Assurance. *4 *4

1.4.1 Quality Assurance Organization (QAO)

The AP&L Quality Assurance Organization as shown in Figure 1-3 is under the direction of the Manager of Quality Assurance, who reports to the Assistant Director of Power Production. The Quality Assurance Organization performs review, surveillance, inspection and audit functions during design, construction and operational phases of AP&L's Nuclear Plants. The duties and responsibilities of the Quality Assurance Organization during the design and construction phases are described in the AP&L Quality Assurance Manual - Nuclear Construction. QAO duties and responsibilities in support of the operational phase are described below. The Quality Assurance Organization is independent of existing design, construction, and operation organizations, and reports directly to the Assistant Director of Power Production. *4 *3 *4 *3 *4

1.4.1.1 Manager of Quality Assurance

The Manager of Quality Assurance shall possess the following qualifications:

1) He shall possess a degree from an accredited school in engineering or a related scientific discipline or equivalent.

2) He shall possess a minimum of five years experience in the quality assurance or quality control disciplines with at least two years in the nuclear field.

3) He shall exhibit the ability to plan, schedule and direct the activities of others assigned to or functioning within the Quality Assurance Organization.

1.4.1.1.1 Responsibilities *

*4

1) The Manager of Quality Assurance is responsible for developing Quality Assurance Program requirements for design, procurement, manufacture, construction, modification, operation, and maintenance related to the Q-Listed system, structures, and components in AP&L Nuclear Plants. *

2) The Manager of Quality Assurance shall be responsible for the audit of all quality assurance activities conducted within the AP&L organization. *4

3) The Manager of Quality Assurance is responsible for the review, approval and verification of the quality assurance requirements placed upon contractors or vendors that provide equipment, material, or services for AP&L Nuclear Plants. *4

4) The Manager of Quality Assurance has the authority to stop work where conditions exist that prohibit effective quality control inspections, or if faulty materials, incorrect workmanship or procedures are detected. *4

(For plant operations the stop work authority is directed through the Plant Superintendent.) *

5) The Manager of Quality Assurance is also responsible for the control, and distribution of QA Manuals and QA Manual Revisions. *

6) The Manager of Quality Assurance is responsible for review and approval of QA programs for outside organizations participating in the AP&L QA program. *

7) The Manager of Quality Assurance establishes provisions for the resolution of disputes involving quality, arising from a difference of opinion between QA personnel and other department (engineering, procurement, manufacturing, etc.) personnel. *

1.4.1.2 Quality Assurance Engineers and Supervisors *

1.4.1.2.1 QUALITY ASSURANCE SUPERVISOR *

The Quality Assurance Supervisor reports to the Manager of Quality Assurance. He shall supervise QA Engineers and Inspectors, as assigned, and assist the Manager of Quality Assurance in the coordination of activities of the QA Section. The Quality Assurance Supervisor may also perform duties normally assigned to Quality Assurance Engineers. *4

1.4.1.2.2 QUALITY ASSURANCE ENGINEER *

The Quality Assurance Engineer (QAE) reports to the Manager of Quality Assurance or QA Supervisor, as assigned. Quality Assurance Engineers assure adequate control of quality activities in the areas of Construction, Operations, Engineering and Audits. They possess the necessary functional independence and authority to investigate, identify and effect solutions to quality problems. Specifically: *

1) The QAE shall have the authority to audit or review practices, records, files, instructions, directions or documents concerned with all areas affecting quality. *

2) The QAE shall schedule and coordinate audits or surveillance efforts in the areas assigned, document findings, and report to the Manager of Quality Assurance and the Manager of the audited area. *

3) The QAE shall not perform any activity concerned with design, procurement, or construction except in the areas of observation, review or audit. He shall have no in-line production or construction responsibilities. *4

1.4.1.2.3 QUALIFICATIONS

The Quality Assurance Engineer and Supervisor report to the Manager of Quality Assurance. They verify by audit the effective implementation of the Quality Assurance Program for Operations. They are thoroughly knowledgeable of the Quality Assurance Program and associated procedures, Safety Analysis Reports, and 10 CFR 50, Appendix B. They are familiar with the regulatory guides, codes, and standards that address quality assurance. They confer with the Manager of Quality Assurance in regard to technical issues, periodic audits, reviews, nonconformances, corrective actions and external relations including inplant contractor and vendor representatives. The Quality Assurance Engineers and Supervisors shall possess the following qualifications: *4

1) Be a graduate of a four-year accredited engineering or science school or equivalent with two years of experience in quality assurance, including testing or inspection of equivalent manufacturing, construction and installation activities. At least one year of this experience should be associated with nuclear facilities; or, if not, the individual shall have completed training sufficient to acquaint him thoroughly with the Quality Assurance requirements of a nuclear facility, or

2) Be a high school graduate with at least five years experience in general quality assurance or engineering of equivalent manufacturing, construction and installation activities. At least two years of this experience shall be in quality assurance, including testing or inspection of equivalent manufacturing, construction and installation activities. At least one year of this experience shall be associated with nuclear facilities; or, if not, the individual shall have training sufficient to acquaint him thoroughly with the Quality Assurance requirements of a nuclear facility, and

3) Possess an understanding of management principles necessary to organize and direct the activities of the assigned personnel. He shall have the ability to communicate clearly and provide effective leadership.

These education and experience requirements shall not be treated as absolute when other factors provide reasonable assurance that a person can competently perform a particular task. Other factors may demonstrate capability in a given job through previous performance or satisfactory completion of proficiency testing.

1.4.1.3 QUALITY ASSURANCE INSPECTORS *4

The Quality Assurance Inspectors report to the MrQA or designated QAE or QA Supervisor and assist him in the implementation of the program by performing audits and inspections as required to assure proper application of the Quality Assurance Program. *4 *

QA Inspectors are assigned by discipline or specific responsibility and are required to have specialized training and at least three years experience (or equivalent) in his area of responsibility.

1.4.2 Nuclear Services Organization

The Nuclear Services Organization (NSO) is a quasi-organization reporting to the Assistant Director of Power Production. The NSO is made up of the Nuclear Projects, Nuclear Fuels, and Licensing Sections of the Production Department. These sections share the common use of procedures, drawings, and administrative controls. *3 * * * *

1.4.2.1 Manager, Nuclear Fuel * *3

The Manager, Nuclear Fuel reports to the Assistant Director of Power Production and shall be responsible for all AP&L activities affecting utilization of nuclear fuel within AP&L Nuclear Plants. His duties include the following: * *

1) Provide technical direction and administrative guidance to engineers and technicians as assigned.

2) Ensures conformance to the quality-related procedures and instructions which apply to design, engineering, procurement and utilization of nuclear fuel by AP&L and its Prime Contractors and vendors.

3) Reviews all design, engineering and fabrication of nuclear fuel by AP&L and its Prime Contractors and vendors.

4) Prepares specifications and requisitions for the purchase of nuclear fuel.

5) Reviews or initiates all correspondence, specifications and drawings relating to nuclear fuel.

6) Recommends "stop work" for cause for the engineering, design and fabrication of nuclear fuel to the Assistant Director of Power Production. *3

7) Coordinates fuel performance analyses with Middle South Services.

8) Maintains accountability for all nuclear fuel within the possession of AP&L.

9) Interfaces with the onsite Nuclear Engineer regarding nuclear fuel receipt, fuel performance, spent fuel shipping and refueling of the nuclear plants.

10) Establishes reload fuel enrichment requirements and core configurations.

11) Serves as a member of the Safety Review Committee.

1.4.2.2 Manager, Licensing *

*3

The Manager, Licensing reports to the Assistant Director of Power Production and shall be responsible for all Federal, State and local licensing requirements for AP&L Nuclear Plants. His duties include the following: *

1) Provides technical direction and administrative guidance to engineers and technicians as assigned.

2) Is designated as the lead AP&L representative for the Nuclear Regulatory Commission licensing activities. *3

3) Coordinates with the Manager, Nuclear Projects, MrQA, Plant Superintendent, and Manager, Nuclear Fuel all licensing interface activities between AP&L, the NSSS supplier, and the architect-engineer for all AP&L nuclear power plants. *4 *4 *4

4) Reviews and recommends approval for or approves all licensing work performed by AP&L, the NSSS supplier, and the architect-engineer. *3

5) Reviews and recommends approval for or approves all permit and licensing applications (Federal, State, and local) necessary for each AP&L nuclear power plant. *3 *4 *4

6) Reviews the plant licensing status on a routine basis with the Assistant Director of Power Production. *3

7) Initiates, reviews or approves all Reportable Occurrence and Significant Deficiency 10CFR50.55(e) reports for each AP&L nuclear power plant. * * *4

8) Reviews or initiates all applicable incoming and outgoing correspondence regarding licensing of AP&L nuclear power plants. * *

9) Coordinates all licensing hearings and meetings with the NRC regarding the Preliminary Safety Analysis Report (PSAR), Final Safety Analysis Report (FSAR), and Environmental Report (ER). *4

10) Provides a licensing schedule for the Assistant Director of Power Production. *4 *3

11) Serves as a member of the Safety Review Committee. *4

12) Coordinates the environmental impact reporting requirements related to changes in nuclear plant design. *4

13. Verifies that deletions from or additions to the Q-List are based on the safety-related functions of the component, system or structure as documented in the Safety Analysis Report. *4

1.4.2.3 Manager, Nuclear Projects *

The Manager, Nuclear Projects reports to the Assistant Director of Power Production and shall be responsible for design, engineering, construction and startup activities related to nuclear plant projects. His duties include the following: *3 *

1) Provides technical direction and administrative guidance to:

   a) Production Mechanical Supervisor *
   b) Production Electrical Supervisor *3
   c) Production Startup Supervisor *

2) Ensures conformance to the Quality Assurance Program by instituting the necessary quality-related procedures and instructions within the Production Department.

3) Reviews and approves design, engineering and fabrication performed by AP&L Prime Contractors or vendors.

4) Reviews and approves procurement documents that purchase equipment, material, and services for the nuclear power plant projects.

1.4.3 ANO Plant Superintendent

The Plant Superintendent (Superintendent of Power Plant) reports directly to the Assistant Director of Power Production and shall be responsible for assuring that the plant is operated in a safe, reliable, and efficient manner, in accordance with Technical Specifications and in compliance with all regulatory requirements. He shall also be responsible for the overall direction and administration of the training, safety and onsite quality programs. *3 *

The Plant Superintendent has the authority to shut the plant down if required, and has final approval of all plant procedures. * *4

1.4.4 Operation and Maintenance Coordinator

The Operation and Maintenance Coordinator reports to the Assistant Director of Power Production and has the following quality-related duties and responsibilities: *3 *

1) Serves as a member of the Safety Review Committee.

2) Is responsible for non-nuclear related plant maintenance and operation.

1.4.5 Manager, Chemistry and Technical Services *4 *

The Manager, Chemistry and Technical Services reports to the Assistant Director of Power Production and has the following quality-related duties and responsibilities: *

1) Serves as a member of the Safety Review Committee.

2) Performs sampling and analyses support activities for nuclear power plant operation and the Environmental Monitoring Program.

1.4.6 Manager, Design and Construction

The Manager, Design and Construction, reports to the Assistant Director of Power Production, and has the following quality-related duties and responsibilities: *3

1) Performs initial site selection and siting surveys for all AP&L power generating stations.

2) Coordinates the design and construction activities for all non-nuclear power generating projects.

1.4.7 Director of General Office Engineering *3 *

The Director of General Office Engineering reports to the Senior Vice President, Production, Transmission and Engineering, and is responsible for construction of transmission lines and substation and transmission system operations. * *4

1.5 ARKANSAS NUCLEAR ONE ORGANIZATION

All activities which affect quality shall be performed by individuals whose scope of authority and duties are clearly established and delineated in writing.

The structure of authority and lines of communication for Arkansas Nuclear One organization is shown in Figure 1-4.

For descriptive purposes the ANO organization may be divided into seven groups, as follows: *3

1) Administrative
2) Nuclear
3) Quality Control
4) Operations
5) Maintenance
6) Technical Support
7) Instrumentation and Controls (I&C) *3 *

1.5.1 Administrative

1.5.1.1 The Plant Superintendent's responsibilities are described in Section 1.4.

1.5.1.2 The Assistant Plant Superintendent assists the Superintendent in all phases of plant management. He assumes all the responsibilities and authorities of the Superintendent in his absence. He is also responsible for coordinating the efforts of the Operation, Maintenance, Technical Support, Nuclear, Quality Control, and I&C Groups. *3

1.5.1.3 The Nuclear Plant Administrator reports to and assists the Plant Superintendent in the plant administration. In addition, he administers the activities of the clerical staff and the accumulation and disposition of records related to all phases of the nuclear power plant. The clerical staff consists of the Records Supervisor and clerks. The Nuclear Plant Administrator also has the responsibility for the security of the plant. *3 *3 *3

1.5.2 Nuclear

1.5.2.1 The Nuclear Engineer is responsible for monitoring reactor core and Nuclear Steam Supply System (NSSS) performance for conducting reactor performance and physics testing as required to assure safe and reliable operation and to provide current accurate information to operations. He is responsible for collection and transmittal of nuclear fuel management data to the Nuclear Fuel Section in Little Rock, Middle South Services in New Orleans, and the reactor vendors as required. The Nuclear Engineer is responsible for on-site safeguards and accountability of the nuclear fuel and assists in planning of all fuel movements including new fuel receipt, fuel shuffling at refueling, and shipment of spent fuel. * * * * * * * * * * * * *3 * * *

1.5.2.2 Two Reactor Engineers assist the Nuclear Engineer in performing the tasks of reactor and NSSS performance monitoring and evaluation in collection and transmittal of nuclear fuel management data and in maintaining the safeguards and accountability program for nuclear fuel. * * * * * *

1.5.2.3 The Reactor Technician is responsible for procurement and preparation of test equipment required for reactor core performance and core physics monitoring and testing. He is further responsible for maintenance of computer software related to the monitoring of reactor or NSSS performance. He assists in the conduct of testing as required. * * * * * *

1.5.3 Quality Control

1.5.3.1 The Quality Control Engineer shall be responsible for implementation of the Quality Assurance Program for Operations at the plant. He reports to, and receives directions from, the Assistant Plant Superintendent. The Quality Control Engineer has authority to communicate with the Manager of Quality Assurance or his representative for technical assistance and coordination in resolving significant conditions adverse to quality.

The duties of the Quality Control Engineer include surveillance, checks, inspections, reviews of quality-related activities and documents, and maintenance of the Quality Control files. The Quality Control Engineer shall have the authority to place any item in a nonconforming status when he determines such item to be in violation of purchase documents, applicable codes and standards, or FSAR requirements.

1.5.4 Operations Group

1.5.4.1 The Supervisor of Plant Operations shall be responsible for directing the actual day-to-day operations of the plant. He supervises the operating staff and is responsible for operator training and qualifications. He coordinates operation-related maintenance activities with the Supervisor of Plant Maintenance, Technical Support Engineer, and Nuclear Engineer. The Supervisor of Plant Operations shall have authority to shut the plant down if conditions warrant such action. *3 *3 *

1.5.4.2 The Assistant Supervisor of Plant Operations reports to and assists the Supervisor of Plant Operations in directing the day-to-day operation of the power plant. He is responsible for coordination and daily review of operating surveillance tests and coordination of operation related maintenance activities. He will assist the Supervisor of Plant Operations in the supervision of core refueling, which includes advance planning for the outage, plant preparation, equipment check-out, and the refueling operation. *3 *3 *3

1.5.4.3 The Shift Operating Supervisor shall be responsible for the actual operation of the unit during his assigned shift. He directs activities of the unit during his assigned shift. He directs activities of the operators on his shift and is cognizant of all operation-related maintenance activities being performed while he is on duty. In the absence of health physics personnel, he shall be responsible for having health physics activities performed as the need arises. The Shift Operating Supervisor on duty has the authority to shut down the unit if, in his judgment, conditions warrant such action. *3 *3 *

1.5.5 Maintenance Group *4

1.5.5.1 The Supervisor of Plant Maintenance shall be responsible for organizing and conducting a preventive maintenance program and for directing repairs of electrical and mechanical equipment. He shall be responsible for the training and qualification of the maintenance staff. He oversees the operation of the warehouse and assures maintenance of an adequate inventory of spare parts and consumables. He coordinates operation-related maintenance activities with the Supervisor of Plant Operations. The Supervisor of Plant Maintenance shall have the authority to make repairs on any structure, system, or component under his control. *3 *3

1.5.6 Technical Support Group

1.5.6.1 The Technical Support Engineer reports directly to the Assistant Plant Superintendent and supervises the Technical Support Group. Technical Support for the plant is divided into four distinct functional subgroups with a supervisor for each group, as follow in paragraphs 1.5.6.2 through 1.5.6.5. * * *3 *

1.5.6.2 The Plant Performance Engineer reports to the Technical Support Engineer. His responsibilities include: 1) Evaluating equipment and system performance over extended periods and recommending methods of improving and maintaining good plant efficiency, 2) investigating and evaluating equipment malfunctions or failures and recommending corrective action to prevent excessive recurrences, and 3) provide assistance in completing records and reports that require special knowledge and/or skill. *3

1.5.6.3 The Health Physics Supervisor reports to the Technical Support Engineer. He is directly responsible for and has the authority to implement the Health Physics program at Arkansas Nuclear One and maintains exposures as low as practical. His daily duties include supervision of Health Physics Technicians and he is essentially free from operating pressure to implement the ALARA program because he reports to the Technical Support Engineer who is on the level of maintenance and operations. *3

1.5.6.4 The Radiochemistry Supervisor reports to the Technical Support Engineer. He has the responsibility for assuring that reactor plant water conditions are maintained within acceptable limits and for management of liquid and gaseous radwaste. *3

1.5.6.5 The Chemistry & Environmental Supervisor reports to the Technical Support Engineer. He has responsibility for assuring that secondary plant water conditions are maintained within acceptable limits. The scope of his responsibility includes surveillance and maintenance of water quality conditions in the condensate and feedwater cycle, startup boiler, heating boiler, nuclear and non-nuclear loops of the intermediate cooling water system, evaluation of circulating water chlorination system, evaluation of plant makeup and condensate demineralizer equipment. *3

1.5.7 Instrumentation and Controls Group *

1.5.7.1 The Instrument & Control group is responsible for the calibration, maintenance, checking, adjustment, testing and surveillance of all instrument and controls systems inherent to the power plant. This includes the plant computer and the maintenance of a test equipment lab to assure the most accurate test equipment possible. The force is under the supervision of the Instrument & Controls Supervisor, who reports directly to the Assistant Plant Superintendent. The Instrument and Controls Supervisor is also responsible for keeping the plant computer operational for data collection, fuel management, and equipment status; maintain inventory of spare parts for I&C reliability and performance, as necessary. Three Assistant Instrument & Controls Supervisors report directly to the Instrument and Controls Supervisor. *3

1.6 QUALITY PROGRAM COMMITTEES

1.6.1 Safety Review Committee (SRC) *4

1.6.1.1 Membership *4

Director Power Production (Chairman)
Assistant Director of Power Production *3
Maintenance and Operations Coordinator
Arkansas Power & Light Company Manager of Safety
Arkansas Nuclear One Superintendent
Manager, Chemistry and Technical Services *4
Arkansas Nuclear One Nuclear Engineer
Radiation and Health Physics Consultant
Nuclear Safety Consultant
Manager, Nuclear Fuel *3
Manager, Licensing *

In his absence, the Chairman shall appoint an Acting Chairman. *3

Alternates:

1) Each permanent voting member shall have an alternate to serve in his absence. Alternates shall be appointed in writing by the SRC Chairman. *3 *

2) No more than two alternates shall serve on the committee at any one time as voting members. *3

1.6.1.2 Function *4

Members and alternates shall collectively review and audit the areas of: *4

1) Reactor Operations *
2) Nuclear Engineering *
3) Chemistry and Radiochemistry *
4) Metallurgy *3
5) Instrumentation and Control *
6) Radiological Safety *
7) Mechanical and Electrical Engineering *
8) Environmental Considerations *
9) Other appropriate Fields Required by the Unique Characteristics of the Nuclear Power Plant. * *

When the nature of a particular situation dictates, special consultants will be utilized to provide expert advice to the SRC upon request of the SRC Chairman. *3 *

1.6.1.3 Meeting Frequency *4

The Safety Review Committee shall meet on call by the Chairman but not less frequently than once per 6 months. During the period of initial operation, *4
Safety Review Committee shall meet no less frequently than once per calendar quarter.

1.6.1.4 Quorum *4

1) A quorum shall consist of the Chairman or his designated alternate and *3
five members including alternates. *

2) Either the Chairman or Acting Chairman shall be present.

3) No more than a minority of the quorum shall have line responsibility for nuclear unit operation.

1.6.1.5 Authority and Responsibility *
*

The Safety Review Committee shall report to and be advisory to the Senior Vice *4
President, Transmission and Engineering (PT&E) in those areas of responsibility *
specified in 1.6.1.6 and 1.6.1.7. *
*

1.6.1.6 Review *

The SRC shall review:

1) The safety evaluations for 1) changes to procedures, equipment or systems and 2) tests or experiments completed under the provisions of *3
10CFR50.59, to verify that such actions did not constitute an unreviewed safety question. *

2) Proposed changes to procedures, equipment or systems which involve an unreviewed safety question as defined in 10CFR50.59. *3

3) Proposed tests or experiments which involve an unreviewed safety question as defined in 10CFR50.59. *3

4) Proposed changes in Technical Specifications or licenses.

5) Violations of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having neclear safety significance.

6) Significant operating abnormalities or deviations from normal and expected performance of plant equipment that affect nuclear safety.

7) Reportable occurrences requiring 24 hour notification to the Commission. *
*3

8) Reports and minutes of Plant Safety Committee meetings. *

1.6.1.7 Audits *4

Audits of facility activities shall be performed under the cognizance of the SRC. These audits shall encompass: *3

1) The conformance of facility operation to all provisions contained within the Technical Specifications and applicable license conditions at least once per year.

2) The performance and retraining of all members of the facility management and operations staff, and the performance, training, and qualifications of new members of the entire facility staff at least once per year. * *3 *

3) The results of all actions taken to correct deficiencies occurring in facility equipment, structure, systems or methods of operation that affect nuclear safety at least once per six months.

4) The Facility Emergency Plan and implementing procedures at least once per two years. *3

5) The Facility Security Plan and implementing procedures at least once per two years. *4

6) Any other area of facility operation considered appropriate by the SRC or the Senior Vice President (PT&E). *3

1.6.1.8 Records *4

Records of SRC activities shall be prepared, approved and distributed as indicated below: * * *3

1) Minutes of each (SRC) meeting shall be prepared, approved and forwarded to the Senior Vice President (PT&E) within 30 days following each meeting. * *

2) Reports of reviews encompassed by Section 1.6.2.6.5), 6), 7), and 8) above, shall be prepared, approved and forwarded to the Senior Vice President (PT&E) within 30 days following completion of the review. * * *3 *

3) Audit reports encompassed by Section 1.6.2.7 above, shall be forwarded to the Senior Vice President (PT&E) and to the management positions responsible for the areas audited within 30 days after completion of the audit. * *

1.6.2 Plant Safety Committee (PSC) *4

1.6.2.1 Membership *4

Assistant Plant Superintendent (Chairman) *3
Technical Support Engineer
Instrumentation and Controls Supervisor *3
Supervisor of Plant Operations *
Supervisor of Plant Maintenance *
Nuclear Engineer
Health Physics Supervisor *3

The Plant Superintendent shall appoint an acting chairman in the absence of * the Assistant Plant Superintendent. *

1.6.2.2 Meeting Frequency *4

Monthly, and as required, on call of the Chairman or his designated alter- *3 nate. *

1.6.2.3 Quorum *4

Chairman plus three members including alternates. *3

1.6.2.4 Alternates *4

Designated alternates shall be appointed by the Chairman in writing and * shall serve only on a temporary basis; however, there shall be no more than *3 two (2) alternate members serving on the committee as voting members at any * one time.

1.6.2.5 Responsibilities *
*
The Committee shall be responsible for: *
*4

1) Review of all procedures required by Appendix A of the Technical * Specifications and revisions and any other proposed procedures or * revisions as determined by the Superintendent to affect nuclear safety. *

2) Review of proposed tests and experiments which affect nuclear safety.

3) Review of proposed changes to the Appendix A Technical Specifications. *3

4) Review of proposed changes or modifications to plant systems or equipment which affect nuclear safety.

5) Review of nuclear unit operations to detect any potential nuclear safety *3 hazards.

6) Investigation of reported instances of violations of the Technical Specifications, such investigations to include reporting evaluation and *3 recommendations to prevent recurrence to the Superintendent. *

7) Performance of special reviews and investigations and render reports thereon as requested by the Plant Superintendent. *3

8) Review of the Plant Security Plan and implementing procedures and shall submit recommended changes to the Plant Superintendent. *3 *

9) Review of the Emergency Plan and implementing procedures and shall submit recommended changes to the Plant Superintendent. * * *3

10) Review of those reportable occurrences requiring 24 hour notification to the NRC. * *

1.6.2.6 Authority *4

The Plant Safety Committee shall: *3

1) Recommend to the Plant Superintendent written approval or disapproval of proposals under items 1.6.3.7(1) through 1.6.3.7(4) above. *3

   a) In the event of a disagreement between the recommendations of the Plant Safety Committee and the actions contemplated by the Superintendent, the course determined by the Plant Superintendent to be more conservative will be followed. Records of the disagreement will be sent for review to the Assistant Director of Power Production and the Safety Review Committee by the Plant Superintendent on the next working day. *3 * *3 *

2) Render tentative determinations, in writing, as to whether or not items considered under 1.6.3.7(1-4) and 1.6.3.7(6) above involve unreviewed safety questions. *3 *4

1.6.2.7 Records *4

Minutes shall be kept by the committee of all meetings of the Plant Safety Committee and copies shall be sent to the Chairman of the Safety Review Committee by the Superintendent. * *3 *

1.6.3 Environmental Responsibilities *4

The Plant Safety Committee and the Safety Review Committee shall review and audit the following:

1) Preparation of proposed Environmental Technical Specifications.

2) Coordination of Environmental Technical Specification development with the Safety Technical Specification.

3) Proposed changes to the Environmental Technical Specifications and the evaluated impact of the changes.

4) Proposed written procedures, as described in Specification 5.5, and proposed changes thereto which affect the plant's environmental impact.

5) Proposed changes or modifications to plant systems or equipment which would affect the plant's environmental impact and the evaluation of the impact of these changes.

6) Results of the Environmental Monitoring Programs prior to their submittal in each semiannual Environmental Monitoring Report.

7) Investigation of all reported instances of violations of Environmental Technical Specifications. Where investigation warrants instances shall be evaluated and recommendations formulated to prevent recurrence.

1.7 ORGANIZATIONAL INTERFACES AND RESPONSIBILITIES

As owner and operator, AP&L assumes full responsibility and authority for the Plant and shall take all appropriate action to assure that the Plant is operated in accordance with sound engineering practices, including applicable codes, specifications and procedures.

The Assistant Director of Power Production is responsible for establishing technical and management interfaces between the constructor, architect-engineer (A/E), nuclear steam supply system (NSSS) vendor, and AP&L. These interfaces may be utilized as needed during operation of a nuclear unit for technical consultation and services. These interfaces are established prior to the complete phaseout of the design and construction forces to assure an orderly transition within the contractor firms. *3 * *1 *410.10 * * *

Each supplier of equipment, material or services and each maintenance or modification contractor is responsible for administering the applicable quality control functions as required by AP&L. The Quality Assurance Organization is responsible for assuring by surveillance and audit that these functions are accomplished for all systems and structures that affect the safety and integrity of the plant.

Visits to manufacturer's shops by Quality Assurance Organization personnel are conducted to establish product quality and to ensure that quality assurance and quality control programs function in accordance with AP&L requirements.

The Manager, Quality Assurance is responsible for communications with the NRC Regional Office regarding NRC quality assurance requirements related to the quality assurance activities described in the Quality Assurance Program for Operations and the implementation of the procedures within AP&L support organizations. *3

The Plant Superintendent is responsible for communications with the NRC Regional Office regarding the adequacy, implementation and use of the Quality Assurance Program for Operations at the Plant. *3

Arkansas Power & Light Company
Production, Transmissio Engineering

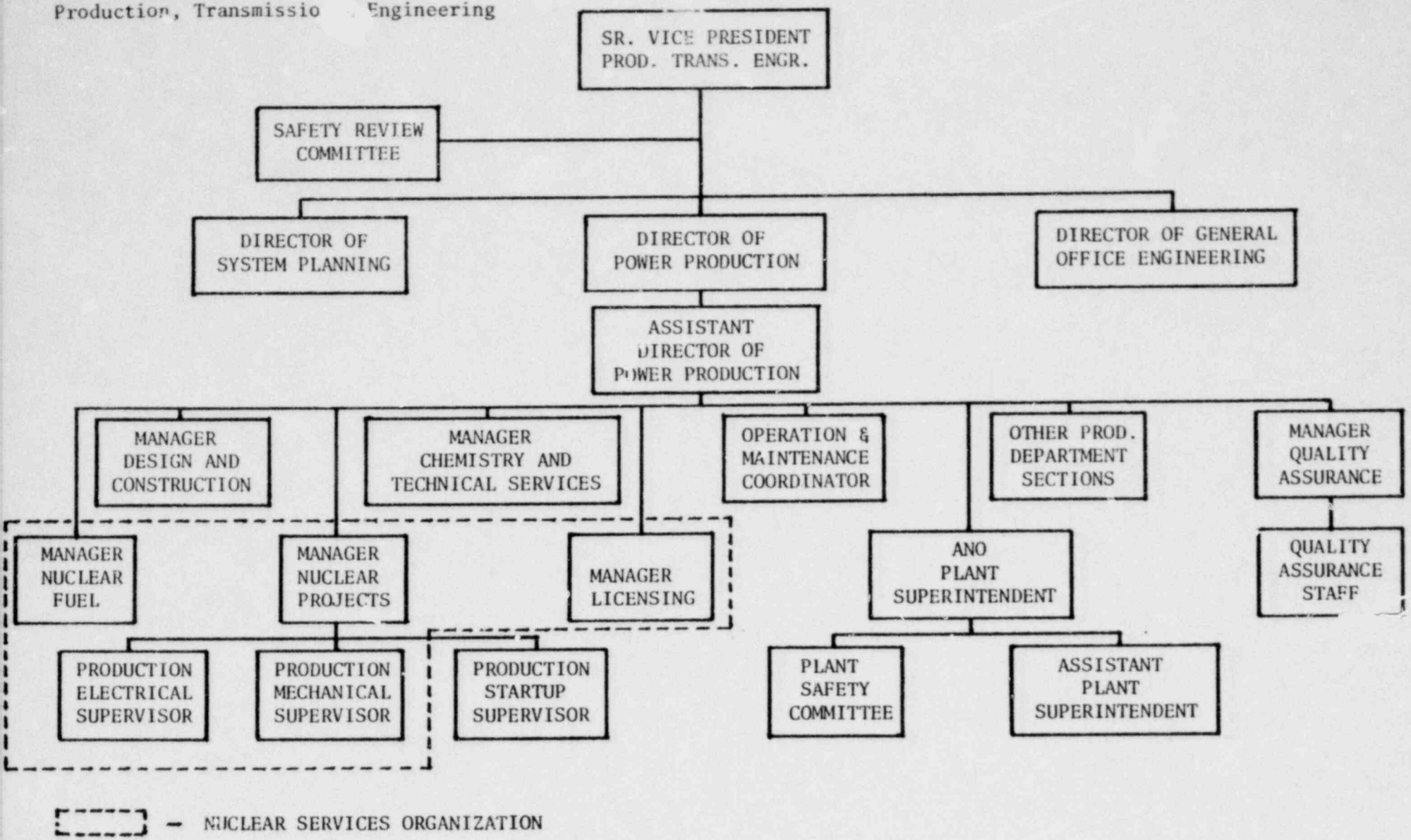

Figure 1-3
Rev. 4

2. QUALITY ASSURANCE PROGRAM

2.1 SCOPE

2.1.1 The AP&L Corporate Quality Assurance Program for Operations (Program) addresses those requirements, responsibilities, and actions that provide managerial and administrative controls to assure safe plant operation.

2.2 PURPOSE

2.2.1 The purpose of the Program is to ensure that Arkansas Power & Light Company nuclear power plants are operated in a safe, reliable and efficient manner in compliance with NRC regulations, applicable industrial standards and codes and all applicable Company policies, rules, approved operating procedures and license provisions. *3

2.3 APPLICABILITY

2.3.1 The Program is applied to systems, equipment and components to the extent consistent with their importance in preventing or mitigating the consequences of postulated accidents that could cause undue risk to the health and safety of the public. The Program is therefore applied, but not limited to the structures, systems and components defined in the Plant Q-List.

2.3.2 The Program functions in addition to the Quality Assurance Manual - Nuclear Construction. The Manager of Quality Assurance and the Assistant Director of Power Production shall approve the Program. Program adequacy and effectiveness is determined by performance of audits. * *4 * *

2.3.3 AP&L shall be responsible for the assurance that nuclear fuel used in AP&L Nuclear Plants is designed, procured, manufactured, and utilized in accordance with regulatory requirements, and related industrial codes and standards. AP&L delegates to Middle South Services the actual performance of quality assurance functions related to the design, procurement and manufacture of nuclear fuel. The Middle South Services Quality Assurance Program for the performance of this activity is reviewed and approved by the Manager of Quality Assurance. The technical interface with Middle South Services is the responsibility of the Manager, Nuclear Fuel. The interface and its attendant duties and responsibilities are controlled by the procedure for fuel management control (NSP-IV-1). Onsite quality control for nuclear fuel is implemented through the use of procedures in the Master Plant Manual. *3 *3 *3

2.3.4 The Program defines responsibilities and duties to specific positions. These responsibilities and duties may be performed by other qualified persons if the specified individual is not available.

2.4 PROCEDURES

2.4.1 Activities which affect quality shall be defined in appropriate procedures. Procedures shall be developed to cover AP&L administration and control. The procedures shall state the policies and instructions necessary to fulfill the intent of the Program. Procedures shall provide for standard forms, lists and checkoffs used in documenting the inspections, certifications, reviews and audits. The Program and the procedures shall be modified or supplemented from time to time as the need for change arises during the life of the Plant. *3 *

2.4.2 The procedures ensure that activities affecting quality are performed under suitably controlled conditions. Controlled conditions include the use of appropriate equipment; suitable environmental conditions for performing the activity such as adequate cleanness and assurance that required prerequisites for the given activity have been satisfied. The procedures also specify the need for special controls, processes, and test equipment to attain the required quality, and the need for verification of quality by inspection and test.

2.4.3 Program Procedures

1) Quality Assurance Procedures

The Quality Assurance Organization employs a system of procedures designated as Quality Assurance Procedures (QAP) in order to implement the requirements of the Program. The QAP's and revisions thereto are prepared by the Quality Assurance Organization, reviewed and approved by the Manager of Quality Assurance and approved by the Director of Power Production. QAP's referenced in this document are listed by title in Table 2-1. *3 *

2) Quality Control Procedures

The plant operation organization employs a system of procedures designated as Quality Control Procedures (QCP) in order to implement Program requirements that control onsite activities. The QCP's and revisions thereto are prepared by the plant staff, reviewed by the Plant Safety Committee and the Manager of Quality Assurance, and approved by the Plant Superintendent. QCP's referenced in this document are listed by title in Table 2-2. *3 *

3) Nuclear Services Procedures

The Nuclear Services Organization within the Production Department employs a system of procedures designated as Nuclear Services

Procedures (NSP) in order to implement Program requirements for the control of design, engineering and procurement activities in support of the operating plant. The NSP's and revisions thereto are prepared by the Nuclear Services Organization, reviewed by the Manager of Quality Assurance, and approved by the cognizant manager and the Assistant Director of Power Production. NSP's referenced in this document are listed by title in Table 2-3. *3

2.4.4 Other organizations within AP&L may establish written procedures to control support activities affected by the requirements of this Program. Procedures developed by such organizations shall be prepared and reviewed for technical adequacy within the cognizant organization, reviewed by the Manager of Quality Assurance and approved by the cognizant organization's supervisor. *3

2.4.5 Any procedure used at the operating plant in the master plant manual will be reviewed and approved in accordance with the Procedure QCP 1004.21. *3

2.5 PROGRAM REVISION AND CONTROL

2.5.1 Program revision and control shall be the responsibility of the Manager of Quality Assurance.

2.5.2 Proposed changes to the Program shall be submitted to cognizant managers for review and comment prior to approval.

2.5.3 Changes to the AP&L Quality Assurance Program shall be approved by the Manager of Quality Assurance and the Assistant Director of Power Production. *4

2.5.4 Quality Assurance Programs of Others

2.5.4.1 The Program includes provisions that require suppliers, contractors, subcontractors, consultants, etc., to maintain and use adequate quality assurance programs.

2.5.4.2 Contractor quality assurance programs shall be reviewed and approved by the Manager, Quality Assurance. The review and approval of such documents by AP&L in no way relieves the contractor of his responsibility to AP&L to meet the applicable quality requirements of the licensing agency as outlined in 10 CFR 50, Appendix B. Audits by the Quality Assurance Organization provide assurance of compliance with applicable procedures. *4

2.6 SYSTEM, STRUCTURE, AND COMPONENT CLASSIFICATION

2.6.1 The system, structures and components that perform safety-related functions are designated as Q-List items. The Q-List specifically identifies those systems, structures and components whose failure could cause an uncontrolled release of radioactivity, or those

essential for safe shutdown and the immediate and long-term operation following a Loss of Coolant Accident. When structures, systems or equipment as a whole are on the list, portions not associated with a loss of safety function are not meant to be included.

2.6.2 The Q-List is initially generated by the architect-engineer during the design phase of the project. The Q-List is considered a design document and is reviewed and approved in accordance with the procedure for design verification (NSP-II-4). The approved Q-List is retained as a functional document throughout the life of the plant to provide for the application of Program requirements to a specific system, structure or component. *3

2.7 TRAINING AND PERSONNEL

Employees whose duties and responsibilities are related to the quality assurance activities at the Plant shall participate in appropriate indoctrination and training programs. It shall be the responsibility of the employee's immediate management to arrange for the quality assurance indoctrination program. The Plant Superintendent has responsibility for Plant Staff personnel indoctrination regarding the Quality Assurance Program.

2.7.1 Quality Assurance Indoctrination

The purpose of quality assurance indoctrination is to familiarize the employee with the Quality Assurance Program. Emphasis is placed on the importance and meaning of quality assurance as it applies to the employee's particular position and function.

2.7.2 The quality assurance indoctrination for the management of AP&L support organizations shall be conducted by the Manager of Quality Assurance or his designated representative. The management of the support organization in turn is responsible for conducting an indoctrination of employees in their respective groups. The indoctrinations they conduct shall cover the areas in which the group or employee has particular responsibilities. The Quality Assurance Program indoctrination is coordinated at the plant by the Training Coordinator or his designated representative. Quality assurance indoctrination includes the following items: *3

1) Discussion of the philosophy and objectives of the Quality Assurance Program.

2) Explanation of the Company's quality assurance organization and demonstration of how it affects the duties and responsibilities of the employee.

3) Summary of the QAP's and QCP's content as applicable with specific emphasis placed on those sections which most directly affect the employee's position.

4) Discussion of interfaces with the NRC and contracted organizations. *3

A record of attendance at quality assurance indoctrination sessions shall be maintained by the Manager of Quality Assurance, for members of the Quality Assurance Organization and AP&L support organizations. The Training Coordinator maintains the record of attendance for plant staff. *3

2.8 PROGRAM REVIEW

2.8.1 The Manager of Quality Assurance shall be responsible for an annual review of the Quality Assurance Program for Operations to determine the effectiveness and proper implementation of the Program (ANO-14). *3

2.8.2 Assigned Quality Assurance personnel regularly review the status, adequacy, and effectiveness of the implementing procedures as part of daily work (ANO-13, ANO-17 and ANO-18). * *4 *

Table 2-1

Quality Assurance Procedures

ANO-3 Surveillance Audits

This procedure establishes methods for performing quality assurance surveillance audits for Arkansas Power & Light Company at the manufacturing, design, or engineering facilities of companies supplying systems, materials, and/or components. It is specifically designed to verify the quality programs of suppliers and provides a method of reporting findings and identifying deficiencies. *4

ANO-6 Supplier Quality Assurance System Evaluation

This procedure establishes methods for performing quality assurance audits at the supplier's facility. It is specifically designed to verify the quality programs of suppliers to 10 CFR 50, Appendix B and ANSI N45.2, and provide a method of reporting findings and identifying deficiencies. * *1 * *

ANO-13 Central Chemistry Laboratory Surveillance Audit * *

This procedure establishes a method for frequent surveillance audits of the Central Chemistry Laboratory to assure compliance with the AP&L Quality Assurance Program. It provides methods to identify areas of deficiency (or potential deficiency) for necessary corrective action. *4 * * *

ANO-14 AP&L Quality Assurance General Audit *3

This procedure establishes methods for general audit of the operating plant(s), Nuclear Services Organization, Quality Assurance Section and others to assure that quality activities conform to the requirements of 10 CFR 50, Appendix B. * *3 *

ANO-15 Review of Supplier Documentation, Evaluation and Qualification * *

This procedure is designed to establish a method for documentation of reviews and evaluations performed in-house by AP&L QA personnel to qualify suppliers for providing Q-list materials or services. This includes the review and evaluation of the Supplier's Quality Assurance Program, Manual, procedures and/or other supporting documentation, as appropriate. * *4 * * *

ANO-17 Operating Plant Surveillance Audit

This procedure establishes a method for frequent surveillance audits of plant quality activities to assure compliance with the AP&L Quality Assurance Program. It provides methods to identify areas of deficiency (or potential deficiency) for necessary corrective action.

ANO-18 Engineering Surveillance Audit

This procedure establishes a method for frequent surveillance audits of engineering activities and activities of other production support activities to assure compliance with the AP&L Quality Assurance Program. It provides methods to identify areas of deficiency (or potential deficiency) for necessary corrective action.

ANO-19 "Shelf Item" Vendor Audit *

*

This procedure establishes methods for performing quality assurance audits at the facilities of the "shelf item" vendor. It is specifically designed to verify that items supplied are identifiable by means acceptable to industry by recognized manufacturers and proven in service or tested by nationally accepted codes and standards. It also provides a method of reporting findings and identifying deficiencies. *1

ANO-20 Preoperational and Startup Program Surveillance Audit *4

The purpose of this procedure is to examine the preoperational program to 10 CFR 50, Appendix B, and identify areas of deficiency and potential deficiency for corrective action. *3

Table 2-2

ARKANSAS NUCLEAR ONE

PLANT QUALITY CONTROL PROCEDURES *2

1004.01 Design Control

This procedure establishes the methods for control and design measures for the modification of those plant systems and plant equipment identified on the plant Q-List. The interface control and responsibilities between ANO and the Nuclear Projects Section for design work are established. *4

1004.04 Turnover of Q.A. Documents from Construction to AP&L

This procedure describes the methodology for Review of Quality Assurance Records associated with plant turnover. It assures that documents are complete and adequate, and that structures, items or components are acceptable to AP&L. *3 *3

1004.05 Purchase Requisition Preparation and Processing

This procedure establishes the methods and responsibilities for preparation, review and approval of purchase requisitions for safety-related items to assure that the procurement documents contain the quality requirements necessary to verify that the item is in conformance with the applicable specifications.

1004.06 Material Receiving and Inspection

This procedure establishes the methods by which material is received at ANO and inspected to assure that it is the correct material, conforms to requirements and has the proper identification and documentation.

1004.07 Control of Special Processes

This procedure covers the establishment of process controls and requirements for qualifications of personnel, procedures and equipment.

1004.08 Q.C. Inspection

This procedure provides control for inspection planning (including inspection hold points), performance of inspection, and reporting for all activities affecting quality. *3 *3

1004.10 Calibration Control

This procedure provides requirements for the calibration program, and guidance for QC surveillance of inspection, measuring and test equipment to assure that the equipment is in calibration at the time of use. *3

1004.11 Handling, Storage and Shipping of Q-List Materials

This procedure establishes the measures and methods for the handling and storage of Q-List materials at ANO to preclude degradation or damage to such material. Also this procedure covers the basic requirements for acceptable material shipping both to and from the plant to prevent damage and maintain the quality of the item being shipped.

1004.12 Operational Test Control

This procedure defines testing and requirements, frequencies, documentation, coordination and administrative controls associated with ongoing testing during the commercial operation of the plant.

1004.13 Nonconformance and Corrective Action

This procedure provides the methodology for reporting, analyzing, dispositioning (including approvals) nonconforming material, parts and components and further provides for inspection of resubmitted material. It also addresses the assessment of cause, recommended corrective action, follow-up and reporting to responsible management.

1004.18 Material Identification

This procedure establishes the methods by which materials, parts and components that will be used at ANO for operation and maintenance can be identified. It addresses identification of material associated with Q-List items and traceability to applicable quality assurance documentation. *3 *3

1004.19 Hold, Caution and QC Tagging

This procedure establishes the administrative controls and the methods for status identification of systems, structures and components. It provides guidelines on the use of stamps, tags and labels during inspections, tests and operations. It also covers use of the QC Hold Tag for Identifying Nonconforming Items.

1004.20 Qualification and Certification of Quality Control Personnel

This procedure establishes the educational and work experience requirements for Quality Control personnel engaged in inspection or testing. *3

1004.21 Handling of Procedures *3

This procedure covers the handling of procedures used in the operating plant. These procedures will cover details necessary for operating the ANO facility in a safe, reliable and efficient manner. Specific areas covered by this plan are Quality Control Procedures, Administrative Procedures, Operating Procedures, Emergency Procedures, Maintenance Procedures, Chemistry and Radiation Protection Procedures, Test and Inspection Procedures and Refueling Procedures. *3 *3 *3

1004.22 Document Control *2

This procedure establishes the methods by which changes and revisions to specifications, drawings and engineering documents that describe the "as-built" condition of ANO are controlled, distributed and dispositioned. This procedure also establishes the distribution lists for procedures and documents used in the quality-related activities at ANO.

1004.23 Drawing Control *2

This procedure establishes responsibility of the Arkansas Nuclear One (ANO) staff and method by which engineering drawings are controlled including receipt, filing, indexing, distribution, disposition of superseded drawings, and retention.

1004.24 Plant Records Management *2

This procedure establishes the methods of documenting handling and storing records generated during operation, maintenance, modification and repair of the Plant.

1004.25 Document Retention and Disposition *3

This procedure identifies the specific records which must be retained for Arkansas Nuclear One and specifies the method of retention and the required retention periods for such records. *3

TABLE 2-3

NUCLEAR SERVICES PROCEDURES

NSP-II-1 Design Interface Control *3

This procedure establishes the internal and external interface control by which the Nuclear Services Organization controls each discipline contributing to the design process within AP&L. The Manager, Nuclear Projects is established as the focal point for all external design work accomplished for AP&L by NSSS supplier, architect-engineer or engineering consultants. * *3 *3

NSP-II-2 Design Criteria *3

The procedure formalizes the establishment of the design bases and criteria for safety-related systems, structures and components.

NSP-II-3 Design Process *3

This procedure establishes the methods for the preparation of drawings, specifications and analyses including calculations. Standardized formats for design disclosure documents are established and specific quality levels of acceptance standards as guidelines are provided.

NSP-II-4 Design Verification *3

This procedure establishes the methods used within AP&L for the independent checking of design documents through a formalized design review or alternate calculation or qualification testing.

NSP-II-5 Design Change Control *3

This procedure establishes the methods used to maintain control of design changes during design, fabrication and construction phases of a nuclear project and for control of modifications to operating nuclear plants.

NSP-II-6 Design Deficiency/Corrective Action *3

This procedure formalizes the reporting of design deficiencies and provides a method of positive feedback to assure that appropriate corrective action is taken to prevent recurrence of the deficiencies. *3

NSP-II-7 Design Document Control *3

This procedure establishes those design documents that are controlled within the Production Department by providing a standardized file and distribution system compatible with the ANO Records System and future projects.

NSP-II-8 Drawing Control *3

This procedure establishes the responsibility of the Nuclear Services Organization and the method by which engineering drawings, either in paper form or on aperture cards, are controlled, including receipt, filing, disposition of superseded drawings and retention. *3

NSP-II-9 Procurement Control *3

This procedure establishes the responsibilities and methods by which procurement of safety-related parts, material or services is reviewed and approved by AP&L. It includes the required QA review and technical review of contractor-prepared purchase specifications and documents.

NSP-II-10 Purchase Requisition Preparation and Processing *3

This procedure establishes the methods used for the procurement of safety-related parts, materials and equipment by AP&L when the item or service is procured solely by AP&L in accordance with a reviewed and approved specification. This procedure provides detailed control for the actual preparation, review and approval of a purchase requisition and for the distribution control and follow-up of the actual purchase order released to the vendor by the Supervisor of Purchasing.

NSP-IV-1 Fuel Management Control * *

This procedure establishes the methods by which the Manager, Nuclear Fuel controls the interface for fuel management between Middle South Services, the operating nuclear plant and the Production Department. *3

4. PROCUREMENT DOCUMENT CONTROL

4.1 SCOPE

4.1.1 Control of the procurement activities shall provide assurance that applicable regulatory requirements, design bases, technical requirements and quality assurance criteria are suitably included or referenced in the documents for procurement of material, equipment, and services, whether purchased by AP&L or by its contractors and/or subcontractors. Procurement documents are the drawings, specifications and purchase requisitions that result in a purchase order.

4.2 GENERAL

4.2.1 Vendors shall be selected from the Qualified Vendor List (QVL).

4.2.2 Vendors may be placed on the QVL as approved by the MrQA by any of the following methods: *

1. By satisfactorily meeting 10CFR50, Appendix B requirements by facility survey by AP&L. (ANO-6) *
2. Pursuant to appropriate documented information received from others, i.e., Architect-Engineer, NSSS Supplier, other utilities, NRC, ASME, etc., indicating a program meeting appropriate requirements of 10CFR50, Appendix B. *4 *
3. A review of the Supplier's current quality records supported by evidence of documented qualitative and quantitative information which can be evaluated. This includes review and evaluation of the Supplier's Quality Assurance Program, Manual, and Procedures, as appropriate. (ANO-15) *
4. Survey of the vendor or contractor to assess his capability to document and execute controls that meet the requirements of the purchase order, including verification that his technical capability, organization, facilities and inspection measures are commensurate with P.O. requirements (ANO-19). Vendors qualified by this method are limited to those supplying in-kind or off the shelf replacement parts that do not alter the design intent of the original component specification. *

4.2.3 Purchase documents for spare or replacement parts or parts of safety-related structures systems or components, including "off the shelf" items, procured by the plant staff shall be reviewed by the Plant Quality Control Engineer for adequacy of quality requirements. The review determines similarity, compatibility, current regulatory applicability and inclusion of, at a minimum, the quality assurance requirements and acceptance criteria of the original part. As part of the review, a document control form shall be included which specifies the documents to be supplied by the vendor to verify that engineering quality, inspections, and tests have been completed. *1 *4

4.2.4 The preparation, review and control of procurement documents are established in the procedures for purchase requisition preparation and processing (NSP-II-10; QCP 1004.05). *3 *

4.2.5 The Manager of Quality Assurance shall verify the compliance with procurement procedures and shall evaluate the effectiveness of these procedures. Methods of verification and evaluation are delineated in quality assurance procedures for surveillance audits and general audits (ANO-3; ANO-6; ANO-14; ANO-17; ANO-18; ANO-19; and ANO-20). *3

4.2.6 When multiple procurement is involved, the Purchasing Department shall apply identical quality assurance requirements to each vendor.

4.2.7 AP&L purchase documents shall require prime vendors to apply the applicable quality assurance requirements to each sub-tier vendor where such requirements apply to the goods or services being purchased by AP&L from the prime vendor.

4.3 REQUISITIONS

4.3.1 Requisitions for Q-List material, equipment or services may be initiated by any plant employee, but shall be reviewed and approved by the cognizant supervisor, Plant Quality Control Engineer and by the Plant Superintendent or Assistant Plant Superintendent or designee before issue of a purchase order. (1004.05) * * *

4.3.2 When a Q-List design change is involved, requisitions are initiated by the Nuclear Projects Section as described in the procedure for purchase requisition preparation and processing (NSP-II-10) or by the plant staff as described in 4.3.1. *4 * * *

4.3.3 Requisitions for Q-List items shall be clearly identified as Q-List.

4.4 SPECIFICATIONS

4.4.1 Specifications for Q-List replacement parts shall be at least equivalent to the applicable portions of specifications under which the equipment was originally furnished. In situations where a part is being replaced for inadequate service or because its operational requirements were modified, its specification must reflect the new requirements imposed.

4.4.2 Q-List specifications shall be reviewed by the Nuclear Services Organization to assure that applicable codes, standards and other design bases are included or referenced and that appropriate and sufficient requirements for quality assurance documentation are incorporated therein. Applicable codes, standards and other design bases are determined from a review of the FSAR, Q-List, material control list, drawings and other design disclosure documents which apply to the "as-built" plant. These review requirements are specified in the quality assurance procedure for design verification (NSP-II-4). *3 * *3 *

4.5 PURCHASE ORDERS

4.5.1 Purchase orders shall be issued by AP&L Purchasing Department and shall affirm those requirements set forth in the specifications.

4.5.2 Purchase orders for Q-List items shall require that vendors and their subvendors possess a Quality Assurance Program consistent with the applicable requirements of 10 CFR 50, Appendix B, or ANSI N45.2 which apply to the specific goods or services provided by that vendor. The Purchase Order shall include provisions for source surveillance and inspection, as required.

4.5.3 Changes to purchase orders and reference documents for Q-List items are to be subject to review equivalent to that of the original documents. *1 *410.13 *

5.3.1 Temporary changes to procedures in the Master Plant Manual which do not change the intent may be made provided such changes are approved by two members of the plant staff at least one of whom holds a senior reactors operators license on the unit affected. *4 *4

5.3.2 Temporary changes to the procedures in the Master Plant Manual which involve an intent change may be made provided such changes are reviewed by the PSC, approved by the Plant Superintendent or his representative prior to implementation. *4 *4

5.4 CHANGES TO PROCEDURES

5.4.1 Changes or revisions to approved Plant instructions, procedures or drawings which affect quality are controlled by the procedure on handling of procedures (QCP 1004.21). *3 *2

5.4.2 Changes or revisions to Quality Assurance and Nuclear Services procedures require the same review and approval as specified by paragraph 2.4.3. * *3 *

5.5 REVIEW OF PROCEDURES, INSTRUCTIONS AND DRAWINGS

5.5.1 Applicable procedures, instructions and drawings shall be reviewed following any unusual incident (e.g., abnormal equipment malfunction or accident) and revised, as necessary to prevent recurrence of such incidents.

5.5.2 Applicable instructions, procedures and drawings shall be reviewed, and revised as necessary, following any modifications to the plant.

5.5.3 Applicable instructions and procedures shall be reviewed, and revised as necessary, following major changes to the Quality Assurance Program.

7. CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

7.1 SCOPE

7.1.1 The purchase of material, equipment and services shall be controlled to assure that, whether purchased directly or through vendors, the material, equipment and services which affect quality conform to the procurement documents. Procurement control shall include provisions, as appropriate, for the evaluation and selection of vendors, objective evidence of quality, furnished surveillance of the vendors and examination of products upon delivery.

7.2 SOURCE EVALUATION

7.2.1 Vendors shall be selected on the basis of demonstrated capability during the design and construction phase to provide a quality product, process or service in accordance with the procurement documents for the operational phase.

7.2.2 When the vendor is not on the Qualified Vendors List (QVL), the Manager of Quality Assurance shall review and approve the vendor's qualifications as described in paragraph 4.2.2 *1 *4

7.3 DOCUMENTATION OF QUALITY

7.3.1 Verifiable evidence of quality shall be furnished by vendors s prescribed in the procedure for procurement control. (NSP-I1-9) *3

7.3.2 Documentary evidence that material and equipment conform to the procurement requirements shall be available at the site prior to installation or use of such material and equipment. As necessary, * vendors are to be requested to maintain documentation. A certificate *1 of conformance is to be maintained at the plant site to reference *410.12 any documentation by the vendor. Such documentary evidence shall be * retained at the site and shall be sufficient to identify the specific requirements, such as codes, standards or specifications, met by the purchased material and equipment. On a case basis the QCE may release certain equipment for installation without proper documentation, but before the equipment is used all documents shall be received. A non-conformance report is filed in such a case.

7.4 SOURCE INSPECTION

7.4.1 The effectiveness of quality control by vendors shall be assessed by the Manager of Quality Assurance at intervals consistent with the importance, complexity, and quantity of the product or service. Requests for source inspection by the Manager of Quality Assurance are made by the plant Quality Control Engineer or the Quality Assurance Engineer (Engineering) during their reviews of purchase requisitions.

7.4.2 Source inspection shall be documented and shall provide a record of compliance by the vendor with regard to:

1) The vendor's quality assurance program.

2) 10 CFR 50, Appendix B, or ANSI N45.2 (applicable to the product or service provided).

3) Design and quality classification, codes and standards which apply to the product or service provided.

4) The procurement document requirements.

7.5 RECEIPT INSPECTION

Upon receipt of Q-List materials at the plant, a receiving inspection shall be performed and the condition of the material clearly and completely recorded in a receiving report as prescribed in the procedure for material receiving and inspection (QCP 1004.06). This procedure assures that:

1) The material, equipment or component is properly identified and corresponds with the receiving documentation, as required by 4.2.3. *1 410.17A

2) Inspection of the material, component or equipment and acceptance records is performed in accordance with predetermined inspection instructions, prior to installation or use. *4

3) Items accepted and released are identified as to their inspection status and forwarded to a controlled storage area or released for installation.

4) Nonconforming items are held in a segregated, controlled area when practical and are clearly identified until proper disposition is made in accordance with the procedure for nonconformance and corrective action. *4 *4

5) Supplier non-conformances which have been accepted by AP&L prior to shipment of the item shall be documented in the procurement records furnished by the supplier at the time of receipt or the item shall be considered non-conforming as required by procedure 1004.06 and 1004.13. * *1 *410.17B * *

7.6 STORAGE

7.6.1 Q-List materials shall be handled and stored as prescribed in the procedure for handling, storage, and shipping of Q-List materials (QCP 1004.11).

7.6.2 Q-List material shall be clearly identified as such and stored in a controlled area.

9. CONTROL OF SPECIAL PROCESSES

9.1 SCOPE

9.1.1 Special processes performed in the course of operations at the Plant are controlled by the procedures on special processes (QCP 1004.07) to assure that they are properly and safely accomplished.

9.2 RESPONSIBILITY

9.2.1 The Plant Superintendent shall be responsible for assuring compliance with the requirements for control of special processes, and for developing adequate staff training and procedures for special processes identified in the future.

9.2.2 The Supervisor of Plant Maintenance, Technical Support Engineer and Quality Control Engineer shall develop procedures and provide qualified personnel for current special processes as delineated in the procedure for control of special processes (QCP 1004.07). *3

9.2.3 Quality Assurance personnel shall periodically audit special process procedures and personnel qualification to assure compliance with applicable codes and specifications. *4

9.3 GENERAL

9.3.1 Special processes include, but are not necessarily limited to:

1) Special maintenance and cleaning.

2) Metal joining, such as welding, and brazing.

3) Thermal cutting.

4) Hot and cold working and bonding.

5) Coating and plating.

6) Nondestructive examination.

7) Heat treating. *4

10. INSPECTION

10.1 SCOPE

10.1.1 On and offsite activities affecting quality are inspected to verify conformance with applicable procedures, design documents, codes and specifications for accomplishing the activity.

10.1.2 Inspection of quality-related activities is controlled by the process*1 for inspection (QCP 1004.08) which specifies inspection requirements,*410.19 techniques, documentation and responsibility as described in Section 3, 4, and 7 of the Program.

10.1.3 Quality-related activities subject to inspection include, but are not limited to:

1) Special processes as identified in Section 9 of the Program.

2) Modifications to the plant.

3) Repairs or replacement of equipment.

4) Receipt of Q-List materials, parts or components.

5) Operation of safety-related items.

6) Special maintenance activities.

7) Inservice Inspection.

10.2 RESPONSIBILITY

10.2.1 The Plant Superintendent shall be responsible for assuring that plant personnel comply with the regulations, codes and procedures controlling inspection.

10.2.2 The Quality Control Engineer or his designated representative shall perform required inspections within the plant. Source surveillance/ inspection shall be the responsibility of the Manager of Quality Assurance. The Quality Control Engineer is responsible for reviewing and approving inspection records and for assuring that inspection hold points were properly documented.

10.2.3 Quality Assurance personnel shall periodically audit inspection procedures, inspection records and personnel qualifications to assure that inspection requirements are being fulfilled. *4

1) Be independent from the individual or group performing the activity being inspected, *4

2) Have satisfactorily completed the qualification requirements as specified in the procedure for qualification and certification of quality control personnel (QCP 1004.20), or *4

3) Be currently qualified and so designated on a list of qualified inspectors approved by the Quality Control Engineer or the Manager of Quality Assurance.

10.5 DOCUMENTATION

10.5.1 Records of inspections shall be maintained by the Quality Control Engineer in accordance with the procedures governing document control, and document retention (QCP 1004.22; QCP 1004.25). *2

11.5 PREOPERATIONAL TESTING

11.5.1 A manual describing the provisions that control the transfer of safety related equipment and records from the principal contractors to AP&L during the preoperational testing phase up to fuel loading, shall be prepared and shall include the identification of those significant QA-related activities, provisions established to assure proper inspection and verification of equipment; the means of tagging and identifying structure systems and components in a manner that denotes the inspection and test status; and provisions to assure the effective transfer, storage, and control of records. *1 *410.8

11.5.2 Beginning with issuance of an operating license, additional administrative controls governing testing activities must be implemented. The administrative controls utilized during previous testing activities must, in some cases, be modified. The ANO Plant Procedures provide for administrative controls to assure the safe operation of the plant. *4

11.5.3 The Manager of Quality Assurance is responsible for establishing audits of the preoperational testing program (ANO-20). *3

15. NONCONFORMING MATERIAL, PARTS, OR COMPONENTS

15.1 SCOPE

15.1.1 Nonconforming items include materials, parts, components, processes and documents that do not conform to applicable regulations, codes, standards, specifications or contractual documents.

15.1.2 Nonconforming items shall be controlled to prevent their inadvertent use or installation. Appropriate procedures shall be established to assure the prompt detection, recording, segregation, verification, technical review and disposition, including records of disposition, of nonconforming items. These activities are referenced in procedures for purchase requisition preparation and processing, material receipt and inspection, inspections, and nonconformance and corrective action (QCP's 1004.05; 1004.06; 1004.08; 1004.13).

15.2 GENERAL

15.2.1 All nonconforming materials, parts, components, processes or documents shall be identified as such and reported to the cognizant supervisor(s) for disposition and corrective action. This rule shall apply no matter where or when the discrepant item is discovered (e.g. during vendor surveillance, receiving inspection, storage surveillance installation, or operation).

15.2.2 Reports of nonconformance shall be prepared and circulated to the Quality Control Engineer, cognizant supervisors, and/or other individuals authorized to approve dispositions and corrective action. These reports shall clearly and positively identify the item, describe the nature of nonconformance and give recommendation for disposition and for corrective action. *3

15.2.2.1 The procedure for material receiving and inspection (QCP 1004.06) defines the action to be taken when defective items are received.

15.2.2.2 Source inspection nonconformances shall be identified to the vendor and reported in inspection reports in accordance with the procedure for quality control inspection (QCP 1004.08). *4 *4

15.2.3 Recommended disposition of nonconformance reports prepared in accordance with the procedure for Nonconformance and Corrective Action (1004.13) shall be approved by the Plant Superintendent prior to implementation. All dispositions involving decisions to "use-as-is" or "repair" shall be reviewed by the Manager, Nuclear Projects. *4 *4 *4 *1 *410.23

15.2.4 The specifications for quality assurance in each procurement document or contract require the vendor or contractor to identify all material or parts that do not conform to the procurement requirements. All such vendor nonconformances shall be reported to AP&L as required by the applicable purchase order or contract.

16.3.1.1 Nonconformances of "significant consequence" include those noted below:

1) Conditions that have directly affected the safety of the Plant or personnel.

2) Conditions that have caused the uncontrolled release of radioactive contaminants (liquid, solid, gaseous or air particulate).

3) Conditions where a number of nonconformances indicate a trend which could lead to unsafe plant operation.

4) Any condition the Superintendent considers to be of major consequence.

Conditions adverse to quality other than violations of Technical Specifications shall be documented as required by the procedure for nonconformance and corrective action (1004.13).

16.3.2 Verification by surveillance or audit of the effective implementation of corrective action shall be documented by Quality Assurance personnel, where appropriate. *4

17. QUALITY ASSURANCE RECORDS

17.1 SCOPE

17.1.1 Quality-related documentation covering design, construction, procurement, fabrication, inspection, maintenance, nonconformance and corrective action, test and audit activities shall be filed and safely stored to provide a written evidentiary record of quality-related activities.

17.1.2 Documents made part of quality assurance records shall include operating logs, results of reviews, inspections, tests, audits, materials analyses, qualifications of personnel, procedures, drawings, specifications, correspondence and related records pertinent to quality as defined in the procedure for records management.

17.2 RESPONSIBILITY

17.2.1 The Nuclear Plant Administrator shall be responsible for the establishment, implementation and maintenance of the records management program to be used throughout the operational life of the plant. *3

17.2.2 The Nuclear Plant Administrator, under the technical guidance and review of the Quality Control Engineer, shall be responsible for ensuring that documentation retention requirements comply with applicable codes and regulations. *3

17.2.3 Quality Assurance personnel shall periodically audit quality assurance records and records filing and storage procedures to assure that the records management program is being properly implemented. *4

17.3 DOCUMENTATION RETENTION

17.3.1 Lifetime Quality Assurance Records

17.3.1.1 Lifetime records are defined as those which meet one or more of the following criteria (QCP 1004.25). *2

1) Those which would be of significant value in demonstrating capability for safe operation.

2) Those which would be of significant value in maintaining, reworking, repairing, replacing, or modifying the item.

3) Those which would be of significant value in determining the cause of an accident or malfunction of an item.

4) Those which provide required baseline data for in-service inspection.

17.3.1.2 Lifetime quality assurance records shall be maintained for the life of the particular item while it is installed in the plant or stored for future use, as prescribed in the procedure for document retention and disposition (QCP 1004.25). *2

17.3.2 Non-permanent Quality Assurance Records

17.3.2.1 Non-permanent records are defined as those which meet all of the following criteria:

1) Those of no significant value in demonstrating capability for safe operation.

2) Those of no significant value in maintaining, reworking, repairing, replacing, or modifying the item.

3) Those of no significant value in determining the cause of an accident or malfunction of an item.

4) Those which do not provide baseline data for in-service inspection.

17.3.2.2 Non-permanent records shall provide evidence that an activity was performed in accordance with applicable requirements, and shall be retained for specified periods as directed by the procedure for document retention and disposition (QCP 1004.25). *2

17.3.3 Categories of records to be maintained and their appropriate retention periods are described in the procedure for document retention and disposition (QCP 1004.25). *2

17.3.4 The Quality Control Engineer shall be responsible for receiving, inspecting and authenticating such documents as directed by the procedure for turnover of quality assurance documents from construction to AP&L (QCP 1004.04).

17.3.5 When approved for receipt by the Quality Control Engineer, such records shall be transmitted to the Nuclear Plant Administrator for filing and storage. *3

17.4 PRODUCTION DEPARTMENT

17.4.1 Production Department personnel, other than Plant Staff, that perform work on the plant in the areas of design, procurement, maintenance, modification, testing, Quality Assurance and special nuclear materials shall document such work and forward the records to the Nuclear Plant Administrator. *4 *4 *3

17.5 STORAGE

17.5.1 Permanent records shall be stored in the records vault and shall be:

1) Adequately protected from earthquake, flood and similar hazardous natural phenomena.

2) Made safe and secure from theft, vandalism and unauthorized use.

3) Adequately protected against environmental deterioration.

4) Adequately protected against fire.

17.5.1.1 The following features or suitable alternatives shall be incorporated in the design of the storage facility:

1) Reinforced concrete, concrete block, masonry, or equal construction.

2) Concrete floor and roof with sufficient slope for drainage; if a floor drain is provided, a non-return check valve (or equal) shall be included.

3) Fire retardant door (two-hour Underwriters' rating minimum).

4) Sealant applied over walls as a moisture or condensation barrier.

5) Surface sealant on floor providing a hard-wear surface to minimize concrete dusting.

6) Foundation sealant and provision for drainage.

7) Forced-air circulation with filter system.

8) Dry chemical or gas fire protection system.

9) No pipe other than those providing fire protection to the storage facility is to be located within the facility.

17.5.1.2 For storage of film and other special processed records, humidity and temperature controls shall be provided to maintain an environment as recommended by the manufacturer.

17.5.1.3 A list shall be prepared designating those personnel who shall have access to the files.

17.5.2 Plant storage systems shall provide for the accurate retrieval of information without undue delay and shall be sufficient to control and account for records removed from the storage facility. *4

17.6 RECORDS INDEXING AND RECEIPT CONTROL

17.6.1 Indexing methods and systems for quality-related records are delineated in the procedure for plant records management (QCP 1004.24) *2

17.6.2 Records submitted for filing in either lifetime or temporary files shall be subject to the following requirements for receipt control:

1) Establishment of a records check list designating the required quality-related records.

2) Establishment of a system designating criteria for document inspection to assure that records are accurately completed, legible, and received in good condition.

3) A file system to indicate which quality-related documents have been received.

17.6.2.1 Implementation and enforcement of receipt control requirements shall be the responsibility of the Nuclear Plant Administrator. *3

17.7 FINAL DISPOSITION

17.7.1 Final disposition of quality-related records is controlled by the procedure for document retention and disposition (QCP 1004.25) which requires that the Nuclear Plant Administrator periodically purge the non-permanent files of records retained past their authorized retention date. *2 *3

18.5.1.2 The findings of audits shall be reported to the Manager of Quality Assurance, the Manager of the area concerned and to the Senior V.ce President, Production, Transmission and Engineering if officer level action is required. When audits are conducted within organizations other than AP&L, written responses are required to describe measures taken to correct deficiencies and prevent recurrence. For audits conducted within AP&L, written responses may be required depending upon the nature of findings. When a written response is requested, the audited organization is responsible for providing the written response in a timely manner. Appropriate follow-up including re-audits is made to determine that nonconformances are effectively corrected and that the corrective action precludes repetitive occurrences. Follow-up action for each finding is required. *4 * *3 * *4 * *4 * *4 *

18.5.2 Records

18.5.2.1 The following records shall be maintained to represent the status of the plant's activities in complying with all aspects of the Quality Assurance Program:

1) Audit reports.

2) Reports from affected organizations indicating completion and effectiveness of action taken to correct deficiencies.

3) Reports of re-audit activities.