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April 7, 1988

W3P88-0967
A4.05
QA

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

SUBJECT: **Waterford 3 SES**
Docket No. 50-382
Updated QA Program

REFERENCE: Letter W3P87-2060 from K.W. Cook (LP&L) to USNRC dated October 1, 1987

Gentlemen:

In Attachment 1 to the referenced letter, LP&L transmitted for your review the updated QA Program description (FSAR Chapter 17.2) which since that time has been implemented in Revision 1 of the Waterford 3 Final Safety Analysis Report.

As you recall, Attachments 2 and 3 of the referenced letter were provided as supplemental information to aid in your review. Attachment 2 contained a marked up copy of the previously accepted QA Program description (FUSAR, 12/18/86). Attachment 3 was a Remarks Document which provided brief explanations of the changes being made and was coded with comment numbers to correspond to Attachment 2. Based on comments received from your Mr. J.R. Boardman during a meeting between LP&L and the NRC in Arlington, Texas on December 21, 1987, these attachments (2 & 3) have been revised to include additional clarifications. A portion of these clarifications, as expressed in the revisions, will require changes to the docketed QA program description which will be implemented in accordance with 10CFR50.71(e).

Please note that the enclosed Attachments supersede Attachments 2 & 3 of the referenced letter.

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Should you have any questions or need additional information regarding this matter, please contact S.A. Alleman, Nuclear Quality Assurance Manager, at (504) 464-3466.

Yours very truly,

R.F. Burski
Acting Manager
Nuclear Safety & Regulatory Affairs

RFB/TJG/plm

Attachments

cc: E.L. Blake, W.M. Stevenson, J.A. Calvo, D.L. Wigginton, R.D. Martin, J.R. Boardman, NRC Resident Inspector's Office (W3)

17.2 QUALITY ASSURANCE DURING OPERATIONS

17.2

The Louisiana Power & Light Company has established a comprehensive program for quality assurance during the operating phase of the Waterford-3 nuclear plant. This Nuclear Operations Quality Assurance Program (hereafter referred to in this document as the Quality Assurance Program) is applied to activities affecting the quality of those items which prevent or mitigate the consequences of postulated accidents which could cause undue risk to public health and safety. Those activities include:

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a) Turnover of the plant systems and equipment from the construction organization;

b) Startup testing;

c) Preoperational testing; and

d) Operation, maintenance, repair, modification, and refueling.

The Quality Assurance Program as described herein complies with Regulatory Guide 1.33, Revision 2, 1978.

Table 17.2-1 contains a listing of those Regulatory Guides (including revision number and date) to which LP&L is committed with exceptions and clarifications. Table 17.2-2 identifies procedures manuals that document the Quality Assurance Program. The Nuclear Operations Department Quality Assurance Manual (hereafter referred to in this document as the Quality Assurance Manual) defines the LP&L quality assurance program. Table 17.2-3 correlates the contents of the Quality Assurance Manual with the criteria of 10 CFR 50, Appendix B. In addition, Figure 17.2-4 shows graphically the hierarchy of quality related programs, procedures, and instructions.

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17.2.2.4

17.2.1 ORGANIZATION

17.2.1

17.2.1.1 General

This section defines the organizational structure for executing the Quality Assurance Program. It also defines the quality assurance responsibilities of individuals and organizations performing quality related activities during preoperational testing and plant operation.

Most quality related activities are performed by personnel outside the Quality Assurance organization. An overview of the performance of these activities relative to Quality Assurance Program compliance is accomplished by Quality Assurance personnel through reviews and audits.

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17.2.1 P.3
17.2.1.3.e

17.2.1.2 Organizations Performing Quality Assurance Functions

17.2.1 P.7

Figure 17.2-1 shows the lines of authority for the major LP&L organizations involved in quality assurance for Waterford-3 during preoperational testing and plant operations. Figure 17.2-2 illustrates how quality related activities of line and support organizations during the operational phase are under the cognizance of the Corporate Quality Assurance Manager and higher

17.2.1 P.7

level corporate management. Figure 17.2-3 amplifies the onsite organization for quality assurance at Waterford-3.

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The organizations and individuals listed below are involved in the implementation of the LP&L Quality Assurance Program and have quality assurance responsibilities as described in the subsections which follow:

a. LP&L Management
b. Senior Vice President-Nuclear Operations
c. Management Audits
d. Safety Review Committee
e. Corporate Quality Assurance Manager
f. Nuclear Operations Quality Assurance Manager
g. Engineering and Systems Development Quality Assurance Manager-Nuclear
h. Plant Manager-Nuclear
i. Plant Quality Manager-Nuclear
j. Plant Operations Review Committee
k. Project Manager-Nuclear
l. Nuclear Services Manager
m. Completion Manager-Nuclear
n. Startup Manager
o. Joint Test Group
p. Purchasing and Material Section
q. Middle South Services
r. Suppliers/Contractors

17.2.1.2.1 LP&L Management

17.2 P.1
17.2.1.1

Louisiana Power & Light Company retains and exercises responsibility for the Quality Assurance Program for Waterford-3. The Senior Vice President-Nuclear Operations who reports to the President of LP&L directs the activities of the Nuclear Operations Department. He has overall responsibility for the Waterford-3 plant.

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17.2.1.2.2 Senior Vice President Nuclear Operations

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The Senior Vice President-Nuclear Operations is responsible for defining LP&L quality assurance and nuclear safety policies. Reporting to him are the Nuclear Services Manager, Project Manager-Nuclear, Completion Manager-Nuclear, Corporate Quality Assurance Manager, Plant Manager-Nuclear, and the Safety Review Committee. He appoints the Chairman and members of the Safety Review Committee.

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17.2.1.1 P.2
17.2.2.8
REF: 099

The Senior Vice President-Nuclear Operations reviews status summaries of the Quality Assurance Program submitted to him by the Corporate Quality Assurance Manager. These summaries, in addition to his review of annual Management Audit results enable him to adequately evaluate the effectiveness of the Quality Assurance Program. He approves and endorses the Quality Assurance Manual and revisions thereto which defines the documented program for implementation by LP&L organizations.

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REF: 100
17.2.1.1 P.2

17.2.1.2.3 Management Audits

In order to obtain an independent evaluation of the LP&L Quality Assurance Program, the Senior Vice President-Nuclear Operations appoints a management audit team that is independent of the Quality Assurance Section to conduct an annual management audit of the program. Members of the audit team are qualified to appropriate standards. Audit results are documented and reviewed by responsible managers who are required to take commensurate corrective actions. Follow up audits are performed to verify effective corrective actions.

17.2.1.2

17.2.1.2.4 Safety Review Committee

The Safety Review Committee (SRC) has been established to provide Louisiana Power & Light Company's senior management additional assurance that Waterford-3 is operated and maintained in accordance with the Operating License, Technical Specifications, and applicable Federal and State regulations which address nuclear safety and in such a manner as to present no undue risk to the public health and safety. The SRC provides for independent review and audit of Waterford-3 operations; reviews changes or modifications which involve an unreviewed safety question; reviews safety evaluations of changes made to the plant and plant procedures under the provisions of 10 CFR 50.59; and performs special evaluations, reviews, and audits as may be requested by the Senior Vice President-Nuclear Operations.

17.2.1.3.0

17.2.1.2.5 Corporate Quality Assurance Manager

The Quality Assurance Section under the direction of the Corporate Quality Assurance Manager has the authority and responsibility for developing, coordinating, and assuring implementation of the LP&L Quality Assurance Program. The Corporate Quality Assurance Manager maintains an overview of Waterford-3 quality related activities through reviews and audits. He and his staff have sufficient authority and organizational freedom to effectively:

17.2.1 P.5

a) Identify quality assurance problems;

b) Initiate, recommend or provide solutions through designated channels; and

c) Verify implementation of solutions.

The Corporate Quality Assurance Manager and the Quality Assurance Section personnel under his direction have authority, which is delineated in writing, to stop or control further processing, delivery or installation of nonconforming material. They have the authority to direct work stoppage when work is not being performed in accordance with approved drawings, specifications, procedures or regulatory requirements and/or when conditions exist which could be significantly adverse to quality if the work were to continue.

17.2.1.3.0.1

17.2.1.2.5.1 Responsibilities of the Corporate Quality Assurance Manager

The principal responsibilities of the Corporate Quality Assurance Manager are:

a

a) Planning, organizing, and administering the Quality Assurance Program;

b
REF: 002

b) Developing, reviewing, approving, and maintaining administrative control of the Quality Assurance Manual and changes thereto;

17.2.2.2 P.2

c) Advising on the scope and content of quality assurance training courses for personnel performing quality related activities;

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d) Assuring effective implementation of the Quality Assurance Program through a comprehensive system of reviews and audits;

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e) Verifying satisfactory performance of quality assurance functions and activities at Waterford-3. In addition to the audit program noted above, this is achieved through:

g

1) Evaluating Quality Assurance Programs and activities of LP&L's suppliers and contractors of quality related material, spare parts and services;

j

2) Reviewing internally generated drawings and specifications and changes thereto to ensure inclusion of quality assurance requirements;

k

3) Reviewing and concurring with quality related procurement documents generated offsite;

g

4) Conducting pre-award evaluations for quality assurance requirements of vendors, suppliers, and contractors where applicable; and

i

5) Auditing activities of Middle South Services as they relate to Waterford-3.

l

f) Developing and maintaining Quality Assurance Section Procedures;

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g) Serving as a member of the Safety Review Committee;

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h) Establishing and maintaining a qualified suppliers list for use in procuring quality related items and services;

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i) Assisting in establishing and administering that portion of the Training Program that addresses quality assurance; and

n

j) Analyzing conditions adverse to quality for quality trends.

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17.2.1.3.0.2

17.2.1.2.5.2 Corporate Quality Assurance Manager's Qualifications

The principal qualifications for the Corporate Quality Assurance Manager are:

a) Graduate of a college or university with a Bachelor's degree in an engineering, science or related field, or equivalent capabilities;

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b) A minimum of four years experience in quality assurance or a quality assurance related activity with at least two of those years in the nuclear power industry as a manager or supervisor;

c) Experience in development and implementation of quality assurance programs, plans, and procedures;

d) Expertise in interpretation and application of Appendix B to 10 CFR 50 and related codes, standards,and regulatory guides;

e) Knowledge of inspection and nondestructive testing requirements;

f) Ability to plan, to organize, and to administer a Quality Assurance Program; and

g) Ability to maintain an effective working relationship with employees, contractors, suppliers, government agencies, and the public.

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17.2.1.3.0

17.2.1.2.5.3 Engineering and Systems Development Quality Assurance Group

The Engineering and Systems Development Quality Assurance Group is directed by a Quality Assurance Manager-Nuclear who reports to the Corporate Quality Assurance Manager.

The Engineering and Systems Development Quality Assurance Group has the responsibility for:

1 a) Developing and maintaining LP&L Quality Assurance policies and procedures;

d b) Assisting other LP&L groups in development of quality procedures and instructions;

g c) Conducting surveys and audits of major contractors and vendors to verify compliance with applicable requirements and guidance;

i d) Auditing those offsite groups within LP&L and Middle South Services who perform quality related activities for Waterford-3; maintaining documentation of quality assurance activities;

h e) Issuing and updating the Qualified Suppliers List (QSL) for use in procurement of quality related materials, spare parts, and services for Waterford-3; and

17.2.2.2 P.2 f) Providing assistance in establishing and administering those portions of Nuclear Operations training programs which address quality assurance.

g g) Conducts surveillance of quality related suppliers in accordance with written procedures.

d,h,k h) Provide assistance in the procurement of quality related materials, spare parts, and services.

REF: 012

17.2.1.2.5.4 Nuclear Operations Quality Assurance Group (Onsite)

17.2.1.3.0.1

The Nuclear Operations Quality Assurance Group located onsite at Waterford-3 is headed by the Nuclear Operations Quality Assurance Manager-Nuclear who reports directly to the Corporate Quality Assurance Manager. The Nuclear Operations Quality Assurance Group has the authority to communicate directly with plant and support organizations. This group assures that the Quality Assurance Program at the site is being effectively implemented by:

k a) Reviewing procurement documents generated offsite to ensure inclusion of applicable requirements;

c b) Reviewing selected quality related administrative procedures to verify inclusion of requirements defined by the Quality Assurance Manual;

j c) Reviewing internally generated design drawings and specifications, and changes thereto to assure that the documents are prepared, reviewed, and approved in accordance with applicable procedures and contain the necessary quality assurance requirements;

013 DELETED GENERIC d) Interfacing with the Plant Quality Group;

e) Providing assistance to plant and support organizations on matters related to quality assurance; and

e f) Monitoring plant activities to verify compliance with applicable requirements;

e g) Conducting audits of quality related activities.

17.2.1.4.1 17.2.1.2.6 Plant Manager-Nuclear

014 GENERIC The Waterford-3 plant operations organization is headed by the Plant Manager-Nuclear (hereinafter referred to as Plant Manager). He reports directly to the Senior Vice President-Nuclear Operations.

The Plant Manager, is responsible for operation and maintenance of the plant and has responsibility for implementation of administrative and quality assurance measures. This responsibility includes:

h a) Providing and maintaining a trained and qualified staff to safely operate and maintain the plant.

i b) Assuring development and proper implementation of plant quality related procedures and instructions for activities such as plant operations, maintenance, repair, test, and inspection;

009 DELETED c) Participating as a member of the Safety Review Committee;

j d) Addressing matters brought to his attention by the PORC.

17.2.1.4.1 P.2 An Assistant Plant Manager, designated by the Plant Manager, is responsible for managing the plant in the absence of the Plant Manager. The responsibilities of an Assistant Plant Manager with regard to chairing the PORC are described in Chapter 13.

17.2.1.4.1 P.3 Reporting directly to the Plant Manager are the Assistant Plant Manager-Plant Operations and Maintenance, the Administrative Manager-Plant Administrative Services, Plant Training Manager, Assistant Plant Manager-Plant Technical Services, and the Plant Quality Manager. The Operations Superintendent, Shift Technical Advisor (STA) Superintendent, Planning and Scheduling Supervisor, and Maintenance Superintendent report to the Assistant Plant Manager-Operations and Maintenance. The Technical Support Superintendent and the Radiation Protection Superintendent report to the Assistant Plant Manager-Plant Technical Services. The Plant Technical Services unit includes the Technical Support Group which provides day-to-day engineering and technical support for plant operation and maintenance activities. Plant Administrative Services Group functions include security, materials management, and plant records management.

The Plant Staff is responsible for the development of plant procedures and instructions and for assuring that quality related activities are carried out in accordance with same. The Plant Staff is also responsible for the accuracy, adequacy, and completeness of records generated during startup and plant operation.

The Plant Manager directs the activities of Plant Startup Phase III.

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17.2.1.2.6.1 Plant Quality Manager

The Plant Quality Manager has direct responsibility to implement the requirements of the LP&L Quality Assurance Program related to Waterford-3 onsite-initiated activities. These responsibilities include:

17.2.1.3.0.1 a

a) Provide a Plant Quality Department adequate to meet Waterford-3 review, inspection, verification, and surveillance requirements;

17.2.1.4.6.f
17.2.10.4

b) Provide training to develop, maintain, and test the skills of inspection personnel;

17.2.1.3.0.1.c,j
17.2.5.2 P.2

c) Provide reviews of instructions, procedures, and drawings to ensure inclusion of quality requirements;

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d) Provide material receipt inspections;

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e) Perform or survey nondestructive examinations and other special processes;

e & r

f) Provide inspection and/or verification to assure maintenance of safety-related materials, parts, and components as required by LP&L's Quality Assurance Program;

s

g) Identify, segregate, review, disposition, and provide notification of the affected organization of nonconforming materials, parts, components, or services;

o h) Track the status of nonconformances until the conditions have been properly evaluated, corrected, and safeguards have been instituted to preclude repetition;

k i) Provide reviews of procurement documents to ensure inclusion of quality requirements;

l j) Prepare inspection instructions;

m k) Provide onsite quality program status reports;

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17.2.1 P.5

17.2.1.2.6.2 Plant Quality Organizational Freedom

Figures 17.2-1 and 17.2-3 show the lines of communication between the Corporate Quality Assurance Manager, the Nuclear Operations Quality Assurance Manager, and the Plant Quality Manager necessary for resolving quality problems. The Plant Quality Manager and his staff have the authority and organizational freedom to perform their quality functions effectively. They:

a) Identify quality problems;

b) Initiate, recommend or provide problem solutions through designated channels; and

c) Verify implementation of satisfactory solutions.

In accordance with approved procedures, and as delineated herein, the Plant Quality Manager and his staff have the authority to stop unsatisfactory work and to control the further processing, delivery, or installation of nonconforming material at Waterford-3. The Plant Quality Manager and his staff do not have direct responsibility for performance of work which they verify/inspect for conformance with established requirements.

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17.2.1.2.6.3 Plant Quality Manager's Qualifications

a) High school graduation plus ten years of related experience in equivalent inspection, examination, or testing activities; or high school graduation plus eight years experience in equivalent inspection, examination, or testing activities, with at least two as Level II, and with at least two years associated with nuclear facilities, or if not, at least sufficient training to be acquainted with the relevant quality assurance aspects of a nuclear facility, or

b) Completion of college level work leading to an Associate Degree and seven years of related experience in equivalent inspection, examination, or testing activities, with at least two years of this experience associated with nuclear facilities, or if not, at least sufficient training to be acquainted with the relevant quality assurance aspects of a nuclear facility, or

c) Four-year college graduation plus five years of experience in equivalent inspection, examination, or testing activities, with at least two years of experience associated with nuclear facilities, or if not, at least sufficient

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training to be acquainted with the relevant quality assurance aspects of a nuclear facility.

17.2.1.4.1.1

17.2.1.2.7 Plant Operations Review Committee

The PORC is established to ensure onsite review and evaluation of plant operation, maintenance, and test programs. The PORC reports to the Plant Manager and advises him on matters related to nuclear safety, including referral of topics requiring review and potential action by the Safety Review Committee. PORC membership and responsibilities are in accordance with Section 6.0 of the Technical Specifications (FSAR, Chapter 16).

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17.2.1.2.8 Project Manager-Nuclear

The Project Manager-Nuclear who is responsible for direction and administration of the Project Management Group during construction completion and operation. This includes managing and controlling the activities of the Engineering and Nuclear Safety, Construction, Contracts, Records & Administration, and Cost/Scheduling Departments.

The functions of Project Management include:

17.2.1.4.4.a

a) Managing the design change process, including initiation, implementation and documentation of design changes, and coordinating this activity with the plant staff;

17.2.1.4.3

b) Reviewing and assessing the safety significance of NRC orders, bulletins, circulars, and generic letters; IE inspection reports; and operating experience information from other sources;

17.2.1.4.3

c) Conducting independent review of plant staff activities affecting safety;

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d) Recommending corrective actions to be taken in regard to safety issues;

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17.2.1.4.1.i
17.2.1.4.1.1

e) Reviewing selected plant operating, alarm, and emergency procedures for technical adequacy;

17.2.1.4.4.d

f) Providing technical input in the selection of outside contracted engineering sources for selected station modifications and managing contracted activities;

17.2.1.4.4.d

g) Providing and managing contract support for retrofit and maintenance activities;

17.2.1.4.i

h) Managing cost control measures and capital expenditure, and operations and maintenance budgets;

17.2.1.6.b

i) Purchasing necessary operational spare parts in support of station modifications;

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j) Integrating schedules;

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k) Ensuring orderly transfer of structures from construction to the plant staff; and

17.2.1.5.m

l) Providing support for records management including execution of the document control and quality assurance record storage program.

17.2.1.5

17.2.1.2.9 Nuclear Services Manager

The Nuclear Services Group is responsible for providing support to the Waterford-3 Plant Staff and interfacing with Nuclear Services Group consultants and other organizations. This group includes Nuclear Support and Licensing, Emergency Planning, and Special Projects.

The functions of the Nuclear Services Group include:

a

a) Coordinating and reviewing responses to Federal, State, and local regulatory agencies, including license related matters;

b

b) Managing the preparation of FSAR updates and responses to IE bulletins, circulars, generic letters, and information notices;

d

c) Administering environmental licensing activities;

e

d) Managing the preparation and approval of the Waterford-3 Emergency Plan and implementing procedures;

g

e) Coordinating the preparation of emergency drill scenarios and performance of practice drills;

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f) Coordinating the activities of Middle South Services relative to nuclear fuel material, conversion, enrichment, fabrication processes, and in-core fuel management;

17.2.1.5.j
17.2.1.4.2.d

g) Coordinating and providing technical support, as required, to radwaste, radiation control, health physics, and ALARA programs; and

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n) Providing plant special projects support, including: reliability and maintainability improvements, plant monitoring computer development, training simulator procurement, and Emergency Operations Facility conceptual design.

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17.2.1.2.10 Completion Manager-Nuclear

The Completion Manager-Nuclear is responsible for the transition of Waterford-3 from the construction to the operations phase. This includes ensuring that the testing and startup activities result in an effective transfer of plant systems to the plant staff. The Completion Manager-Nuclear functionally reports to the Project Manager-Nuclear for system transfers. He reports to the Senior Vice President-Nuclear Operations for all other matters.

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17.2.1.2.10.1 Waterford Startup Group

The Startup Manager who reports to the Completion Manager-Nuclear is responsible for managing Waterford-3 Startup activities. The Waterford Startup Group's responsibilities include:

a) Preparation of startup administrative and test procedures;

b) Planning and coordinating tests;

c) Directing and supervising startup testing activities;

d) Documenting and evaluating test results;

e) Ensuring orderly transfer of plant systems, and components to the plant staff including a complete status of same; and

f) Providing assistance to the Plant Staff during Phase III testing.

17.2.1.2.10.2 Joint Test Group

The Joint Test Group (JTG) is composed of personnel from LP&L's Waterford-3 Startup Group, Quality Assurance, construction, contractors/consultants, and the Plant Staff. The JTG is responsible for procedure reviews and review of prerequisite (Phase I) and preoperational (Phase II) test results. The JTG is also responsible for recommending the disposition of test results for Phase II testing to the Plant Manager. The JTG is responsible for conducting a comprehensive review of the Phase II test program prior to initial fuel load and the start of Phase III testing. They function as an advisory group to the PORC during Phase III testing. The JTG reports to the Startup Manager.

17.2.1.6 17.2.1.2.11 Purchasing and Materials Section

The LP&L Purchasing and Materials Section of the Corporate Services Department performs various functions to support procurement of quality and non-quality related material, equipment, spare parts, and services. These functions include preparation and release of bid requests, coordination of bid evaluations by Quality Assurance and engineering groups, as required, and issuance of procurement documents.

17.2.1.7 17.2.1.2.12 Middle South Services

LP&L delegates to Middle South Services, Inc. (MSS), the authority to perform those quality assurance functions necessary to ensure that the nuclear fuel is designed and fabricated in accordance with regulatory requirements and accepted codes, standards, and specifications. The MSS Quality Assurance Section monitors the design and fabrication of the fuel through a program of audits of the fuel fabricator, including both design review audits and fuel fabrication audits. MSS also conducts audits of component suppliers as deemed necessary to ensure the quality of the fuel.

Formal audit reports are issued by MSS to document their audit activities and to identify nonconformances or other items requiring action by the fuel fabricator. Resolution of nonconformances or other items requiring action is verified by MSS and documented in follow-up reports. The LP&L Corporate Quality Assurance Manager is on distribution for all audit and follow-up reports pertaining to LP&L and Waterford-3.

MSS is also utilized to complement and supplement LP&L teams during Quality Assurance audits and surveys. The MSS Quality Assurance Section interfaces with and reports through the LP&L Corporate Quality Assurance Manager for the above activities. The MSS Quality Assurance Section conducts internal audits of those quality related activities associated with Waterford-3 that are performed by other MSS groups.

LP&L Management may use MSS to conduct supplemental internal management audits of the LP&L Quality Assurance Program. For this purpose, MSS Quality Assurance reports to the LP&L Senior Vice President-Operations.

MSS also provides support to LP&L in the areas of Nuclear Engineering, Fuel Management, and Nondestructive Examination (NDE) activities.

17.2.1.8

17.2.1.2.13 Suppliers/Contractors

Suppliers/contractors of quality related material, equipment, spare parts, and/or services are, as appropriate, required by the procurement documents to have a quality assurance program. In such cases, a line of communication exists between the supplier/contractor and the LP&L Quality Assurance organization. The overall responsibility for quality assurance at Waterford-3 remains with LP&L at all times.

The quality assurance functions performed by suppliers of quality related items and services depend upon the nature of the activities, services, equipment, materials, systems, and/or components provided. Supplier Quality Assurance Program requirements are prescribed through procurement documents to provide controls and documentation in accordance with the scope of activities involved and their importance to safety.

17.2.2 QUALITY ASSURANCE PROGRAM

17.2.2.1

17.2.2.1 General

LP&L's objective is to design, construct, test, operate, maintain, and modify the Waterford-3 nuclear plant with the highest degree of functional integrity and reliability necessary to avoid undue risk to the health and safety of employees and the general public. It is the policy of LP&L that the program for the design and design changes, procurement, fabrication, installation, inspection, testing, operation, maintenance, repair, refueling, and modification of Waterford-3 complies with the requirements of 10 CFR 50, Appendix B and related regulatory guidance.

This section describes LP&L's Quality Assurance Program for Waterford-3 which assures that quality related activities are performed in a controlled manner

and documented to provide objective evidence of compliance with NRC regulations and guidance. This program takes into account the need for special controls, processes, test equipment, tools, and skills to attain the required quality, and the need for verification of quality by inspection, testing, surveillance, and audit. The design control portion of this program will be implemented 60 days prior to fuel loading. This program as it applies to other areas will be implemented 90 days prior to fuel loading with applicable portions applied to preoperational testing before that time.

Procedures are developed by LP&L to assure that the Quality Assurance Program complies with the requirements of 10 CFR 50, Appendix B. These are applicable throughout the operational phase, including startup testing (Phase I, II, and III) (see Chapter 14).

Additionally, when directed contractors/suppliers of quality related equipment and services are required to demonstrate compliance with the provisions of LP&L's Quality Assurance Program.

The Quality Assurance Program is implemented by those organizational groups and departments whose activities affect quality at Waterford-3 (Figure 17.2-1). The personnel within these groups and departments use approved procedures that control quality related activities. These approved procedures incorporate the requirements of the regulatory guides and the NRC endorsed ANSI Standards to which LP&L has specifically committed. Indoctrination and training programs are provided to train personnel in the requirements of the Quality Assurance Program.

17.2.2.3

17.2.2.2 Development of Program

Figure 17.2-4 depicts, in graphic form, the hierarchy of documents comprising LP&L's Quality Assurance program. This figure illustrates the relationship of the various programs, procedures, and instructions which control the quality related activities for Waterford-3. The Quality Assurance Program defines the duties of individuals and organizations participating in quality related activities.

REF: 002
17.2.2.3.b
17.2 P.3

The quality assurance policies, goals, and objectives are documented in the Quality Assurance Manual. This document provides the means for communicating the understanding that implementation of the Quality Assurance Program is mandatory for responsible organizations and individuals and is enforced. Quality Assurance Program policy is approved by the Senior Vice President-Nuclear Operations.

The hierarchy of documents in the Quality Assurance Program is as follows:

17.2.2.3
a

a) The first tier of documents consists of those government regulations; industry codes and standards; and LP&L policies and directives, commitments, specifications, and criteria necessary to design, construct, operate, and maintain Waterford-3. An intergral part of this tier is Chapter 17.2 of the Waterford-3 FSAR.

b

b) At the second tier of documentation, the Quality Assurance Manual defines the responsibilities, interfaces, and authorities of LP&L personnel,

contractors, vendors, and suppliers during the operation and testing phases of Waterford-3. The Quality Assurance Manual defines LP&L's requirements to implement 10 CFR 50, Appendix B and its regulatory guides, and ANSI Standards which are listed in Table 17.2-1.

17.2.2.1 P.3

The individual Nuclear Operations Department groups assigned responsibilities under the scope of the Quality Assurance Manual are responsible for the development, maintenance, and implementation of procedures and instructions to detail respective elements of program performance.

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17.2.2.3

The Quality Assurance Manual assigns to the Corporate Quality Assurance Manager the responsibility and authority for developing, coordinating, and evaluating the implementation of the Quality Assurance Program, and to responsible Nuclear Operations Department managers the authority and responsibility for the execution of the administrative controls and quality assurance measures. Responsibilities for approval and control of the Manuals and procedures are defined in Table 17.2-2.

A listing of manual assignees is maintained and revisions are issued as necessary to ensure effective implementation of regulatory requirements. Personnel holding controlled copies of the manual are required to remove superseded and outdated pages when filing revisions.

17.2.5.2 P.2
FIG. 17.2-3

The Corporate Quality Assurance Manager is responsible for review of selected procedures that implement the QA program (Figure 17.2-4).

17.2.2.3.c

c) The third tier of documentation is departmental/section level procedures and instructions which implement the Quality Assurance Manual.

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TBL 17.2-2

The Plant Operating Manual (POM) consists of a series of procedures that address required aspects of plant management and operations. These procedures:

1) Implement the policy and direction of the Quality Assurance Manual to provide control over quality related operations and activities to a degree consistent with their importance to safety;

2) Provide a clear understanding of the operating philosophy at Waterford-3; and

3) Delineate the responsibilities and authorities of Waterford-3 plant personnel.

The Quality Assurance Section Procedures Manual provides procedures to specify and control the activities of the Quality Assurance Section.

The Startup Administrative Procedures identify to individuals associated with the Startup Test Program their respective responsibilities and the procedures which govern the administration of the Startup Test Program.

Project Management Procedures and Nuclear Services Procedures prescribe activities and responsibilities which apply to the Nuclear Services and Project Management Groups based on LP&L's commitments to codes, standards, and quality assurance requirements.

17.2.2.4

17.2.2.3 Identification of Safety Related Structures, Systems and Components

The Quality Assurance Program provides control of activities affecting the quality of structures, systems, and components to an extent commensurate with their importance to safety. Table 3.2-1 of this FSAR provides the safety related classification of plant structures, systems, and components and identifies those items subject to the 10 CFR 50, Appendix B, Quality Assurance Program as herein described.

Procedures for preparation and control of procurement documents provide guidance for determination of classification of spare and replacement parts. These procedures require that applicable codes, standards, and regulations, as well as the FSAR be reviewed and considered when determining the classification of spare or replacement parts or materials.

17.2.2.4 Resolution of Disputes

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17.2.2.5

Disputes involving quality, arising from a difference of opinion between the Plant Quality Group and other plant groups (Maintenance, Operation, etc.) or contractor/suppliers of quality related equipment and services are normally resolved through the Plant Manager. If a satisfactory resolution cannot be reached, the Plant Quality Manager has the organizational freedom to bring the dispute to the attention of the Nuclear Operations Quality Assurance Manager or to the Corporate Quality Assurance Manager, if necessary, using the line of communication shown in Figure 17.2-1.

Disputes involving quality, arising from a difference of opinion between the Quality Assurance Section and the Nuclear Operations Department are resolved through the LP&L Senior Vice President-Nuclear Operations.

Disputes involving quality, arising from a difference of opinion between the Quality Assurance Section and other departments within LP&L, but external to the Nuclear Operations Department, are normally resolved via direct interaction between managers involved. If a satisfactory resolution cannot be reached, the disputes are resolved through higher levels of management.

17.2.2.6

17.2.2.5 Quality Assurance Indoctrination and Training

Indoctrination and training programs are established for Nuclear Operations Department personnel performing quality related activities. The program is designed to ensure that personnel involved are knowledgeable in the quality assurance procedures/requirements and have the necessary proficiency to implement the requirements. The scope, objective, and method of implementing the indoctrination and training program are documented in approved procedures.

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17.2.2.2

The Plant Manager is responsible for the conduct of quality assurance and administrative controls training to assure that Nuclear Operations Department personnel are properly trained to perform activities in a safe and effective manner.

17.2.2.2

The Quality Assurance Section assists with the development and conduct of quality assurance indoctrination and training. The Corporate

17.2.2.2 Quality Assurance Manager reviews and concurs with the content of quality assurance indoctrination and training programs.

17.2.2.6 The Quality Assurance Training and Indoctrination Program requires that:

a) Personnel responsible for performing activities that affect quality are instructed on the purpose, scope, and implementation of quality related manuals, instructions, and procedures;

b) Personnel performing activities that affect quality are trained and qualified in the principles, techniques, and requirements of the activity being performed;

c) Proficiency and requalification of personnel performing activities requiring certification are maintained by retraining, re-examining, and/or recertifying on a periodic basis;

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d) Proficiency tests be given to those personnel performing and verifying activities affecting quality, and acceptance criteria developed to determine if individuals are properly trained and qualified;

e) Certificates of qualification clearly delineate (1) the specific functions personnel are qualified to perform and (2) the criteria used to qualify personnel in each function; and

f) Documentation concerning training and qualification programs which describes the content, who attended, and results of tests as required by the training program are maintained.

The training program for Waterford-3 is further described in Chapter 13.

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17.2.18.3 P.2 The Quality Assurance Section conducts audits of other organizational units, such as vendors, suppliers, and contractors engaged in quality related activities to verify that personnel are adequately trained, indoctrinated, and qualified.

17.2.2.7 17.2.2.6 Controlled Conditions for Quality Affecting Activities

Quality affecting activities are accomplished under controlled conditions by personnel with the necessary skills to attain the required quality. Activities affecting quality are performed with appropriate equipment, under suitable environmental conditions and with the assurance that prerequisites for inspections and tests have been satisfied.

17.2.2.8 17.2.2.7 Management Review of the Quality Assurance Program

17.2.18.10
17.2.1.7 P.4 The Senior Vice President-Nuclear Operations ensures that a management audit of LP&L's Quality Assurance Program is conducted annually by a qualified independent auditing organization.

The information from these management audits in conjunction with summaries of the Quality Assurance Program status presented to him by the Corporate Quality

Assurance Manager enables the Senior Vice President-Nuclear Operations to assess the scope, status, implementation, and effectiveness of the program and takes action to assure that the program complies with applicable regulatory requirements.

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17.2.2.8 Startup Testing (Phase I, II, and III) and Systems Turnover

The startup test program is part of the overall Quality Assurance Program. This program meets the intent and guidance of applicable regulatory guides and standards listed in Table 17.2-1. The testing and turnover activities are accomplished by qualified personnel using approved and controlled procedures and drawings. Required records documenting the activities are controlled and maintained in accordance with program requirements. Responsibilities and control of quality related activities will be transferred from the principal contractors to LP&L during the phase out of design and construction, and during preoperational testing and plant turnover in accordance with contractural requirements.

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17.2.2.9 Maintenance of Quality Assurance Program

Amendments to the FSAR and revisions to the Quality Assurance Manual are issued as necessary to support effective implementation of the Quality Assurance Program. The NRC is notified annually of any changes to the Quality Assurance Program description that do not reduce the commitments previously accepted by the NRC. If a change is contemplated which would reduce the commitments in the approved Quality Assurance Program description, the proposed change is submitted to the NRC for approval prior to implementing the change.

LP&L requires their principal contractors to notify LP&L of changes to their Quality Assurance Program description. Significant changes are reported, as applicable, to the NRC in writing. In addition, LP&L requires principal contractors to provide notification of changes which reduce the commitments to a subcontractor's Quality Assurance Program description which have the effect of changing the Quality Assurance Program of the principal contractor or LP&L.

033
17.2.2.10

17.2.2.10 Fire Protection Program

The Quality Assurance Program for Fire Protection is under the control of the Corporate Quality Assurance Manager. This program as defined in the Quality Assurance Manual consists of the necessary 10 CFR 50 Appendix B criteria. The Corporate Quality Assurance Manager's control of the Fire Protection Quality Assurance Program includes formulating and/or verifying that the program incorporates suitable requirements and verifying the effectiveness of the program through review and audit.

17.2.3 DESIGN CONTROL

17.2.3.1

17.2.3.1 General

The Quality Assurance Program defines the quality requirements for the design control of plant quality related systems, components, structures, and equipment and modifications thereto. Procedures are established which address company activities regarding design control. These procedures assure that design activities associated with the preparation and review of design documents for Waterford-3 are executed in a planned, controlled, and orderly manner.

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17.2.3.2

17.2.3.2 Design Control Measures

The Project Manager-Nuclear is responsible for design activities during the operational phase, beginning with 60 days prior to core loading. The Project Management Group is responsible for preparing, reviewing, approving, and verifying design documents such as system descriptions, design input and criteria, design drawings, design analyses, computer programs, specifications, and procedures.

17.2.3.3

The design control program includes design activities associated with the preparation and review of design documents, including the translation of applicable regulatory requirements and design bases into design, procurement, and procedural documents. Included in the scope of the design control program are such activities as field design engineering; physics, seismic, stress, thermal, hydraulic, radiation, and the SAR accident analyses; associated computer programs; compatibility of materials; accessibility for inservice inspection, maintenance, and repair; quality standards; and safety significance. When a new design or design change is prepared during operations, quality standards are specified in the design documents. Deviations and changes from these quality standards are controlled in accordance with approved procedures.

17.2.3.3 P.2

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Procedural control is established for design documents that reflect commitments of the FSAR. Such design documents subject to procedural control include specifications, calculations, computer programs, system descriptions, the FSAR when used as a design document, and drawings including flow diagrams, piping and instrument drawings, control logic diagrams, electrical single line diagrams, structural drawings for major facilities, site arrangements, and equipment locations. Specialized reviews are used when uniqueness or special design considerations warrant.

17.2.3.5 P.2

Procedures are established to assure that verified computer codes are certified for use and that their use is specified.

17.2.3.3

New designs and modifications proposed for existing designs which involve quality related structures, systems or components are reviewed in accordance with approved procedures to assure that:

a) Design characteristics can be controlled, inspected, and tested to ensure no adverse effect on safety; and

b) Inspection and test criteria are identified.

17.2.3.4
17.2.3.3 P.4

Internal and external design interface controls, procedures, and lines of communication are established and described for the review, approval, release, distribution, and revision of documents involving design interfaces to assure structures, systems, and components are compatible geometrically, functionally, and with processes and environment. A documented check is conducted to verify the dimensional accuracy and completeness of design drawings and specifications.

17.2.3.6

17.2.3.2.1 Design Verification

17.2.3.6 P.1

Design verification processes such as design review, alternate calculations, and qualification testing are accomplished in accordance with approved procedures.

17.2.3.6 P.6.b
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Qualification testing of a prototype unit under adverse design conditions is required when a test program is used to confirm design adequacy. If design verification is by other than qualification testing, it is normally completed prior to drawing release. In cases where this cannot be done and design verification is deferred, the justification for such action is documented and the unverified portion of the design appropriately identified and controlled. Design verification will be complete prior to relying upon the structure, system, or component to perform its quality related function.

17.2.3.6 P.7

17.2.3.1
17.2.3.6 P.9

Procedures require that qualified individuals or groups responsible for design verification be other than the original designer or the designer's immediate supervisor. However, the designer's immediate supervisor may perform the verification if the following conditions apply:

a

a) The supervisor is the only technically qualified individual;

b

b) The need is individually documented and approved in advance by the responsible management; and

17.2.3.6 P.10

c) Quality assurance audits take into account the frequency and effectiveness of using supervisors as verifiers to guard against abuse.

17.2.3.6 P.1&4

The responsibilities of the qualified design verifier are identified in appropriate procedures. The procedures specify the areas and features to be verified and the documentation requirements.

17.2.3.6 P.6

If the design verification method is by test alone, the following provisions are included:

a

a) Procedures provide criteria that specify when verification should be by test;

b

b) Prototype, component, or feature testing is performed as early as possible prior to installation of plant equipment, or prior to the point when the installation would become irreversible; and

17.2.3.6 P.6 c) Verification by test is performed under conditions that simulate the most adverse conditions as determined by analysis.

17.2.3.7 P.1

17.2.3.2.2 Design Changes

Quality related design and specification changes, including field changes, are subject to the same type of design controls and approvals as the original design. LP&L reserves the option of employing qualified organizations other than the original designer in order to modify or develop designs. Anyone preparing design changes reviews the original design and/or secures design information from the original designer, as appropriate. Errors and deficiencies identified during the design process are documented and corrective action taken to preclude repetition.

17.2.3.1 P.2
17.2.3.7 P.2

17.2.7.9 Materials, parts, and equipment which are commodity, catalogue (off the shelf), or which have been previously approved for a different application are reviewed for suitability. Such reviews are documented. The organizations responsible for design reviews and other design activities are identified by written procedures which delineate the authority and responsibilities involved. Valid industry standards and specifications are utilized in the process of selecting suitable parts and materials.

17.2.6.6
17.2.3.9 Design changes are included within the scope of the Waterford-3 document control program. Design change notices are controlled documents. Any design change which might affect the performance of plant personnel duties is documented in a change notice and distributed to the affected parties. Working documents, such as drawings, specifications, and procedures, which are affected by design changes are also revised and controlled so that responsible parties remain informed.

17.2.3.8 17.2.3.3 Maintenance and Modification

A program is provided to ensure that quality related structures, systems, and components are maintained at the quality level required for performance of their intended functions. A preventive maintenance program is established which includes procedures dictating maintenance frequency and type.

17.2.3.8 P.6 Maintenance is performed in a manner which does not compromise plant safety.
17.2.3.8 P.1 Maintenance or modification activities which affect the functioning of quality related structures, systems, or components are performed in a manner which will maintain a quality level at least equivalent to what was originally specified. Inspection and performance testing verify that quality related structures, systems, and components are functioning adequately after
17.2.3.8 P.2 maintenance or modifications are complete. The results are documented and maintained in accordance with applicable records management procedures.

17.2.3.2 The Plant Manager has final approval authority for station modifications.

17.2.3.4 Replacement or Repair

17.2.3.8 P.6 Malfunctions are promptly documented and evaluated to determine probable cause. If evidence indicates that common components in quality related systems have performed in an unsatisfactory manner, corrective measures are
17.2.3.8 P.2 planned prior to replacement or repair of such components. Approved procedures for repair are made available prior to actual performance.
17.2.3.6 Replacement parts must receive adequate evaluation and/or testing if they are not of a design which has been previously proven satisfactory. A phased
17.2.7.9 replacement is considered, when possible, to permit inservice performance evaluation and minimize the possibility of a hidden deficiency developing into a systematic failure. An augmented testing and inspection program is implemented following a large scale component replacement or repair as necessary to demonstrate component reliability.

17.2.4 PROCUREMENT DOCUMENT CONTROL

17.2.4.2 17.2.4.1 General

Procurement document control applies to documents used to obtain materials, spare and replacement parts, components, and services required to modify,
17.2.4.2 maintain, repair, test, inspect, or operate Waterford-3. Quality Assurance Program procedures define requirements for controlling procurement of quality related items and services. Quality related suppliers/contractors and subtier
17.2.4.3.c suppliers are required, through procurement documents, to implement quality assurance programs consistent with the LP&L Quality Assurance Program. It is LP&L policy that the quality and design of purchased replacement materials,
17.2.7.10 components, and spare parts are equal to or better than the original item.

17.2.4.2 17.2.4.2 Preparation of Procurement Documents

Nuclear Operations Department personnel are responsible for preparation of procurement documents for quality related parts, components, systems, and services. Their responsibilities include procurement planning, preparation, review, approval, and control of purchase requisitions; bid evaluation; and assisting in supplier selection (subject to Quality Assurance Section concurrence).

17.2.4.4 17.2.4.3 Control of Procurement Documents

2.4.3 b&c Procedures are provided for the review of procurement documents to determine that quality requirements are correctly stated, inspectable, and controllable; there are adequate acceptance and rejection criteria; and procurement documents have been prepared, reviewed, and approved in accordance with Quality Assurance Program requirements. Organizations preparing purchase requisitions are responsible for determining the applicable quality classification in accordance with 17.2.2.3 and referencing codes, standards, design bases, or other provisions necessary to assure adequate quality. Procurement documents as applicable:

17.2.4.3 a) State the scope of the work to be performed by the supplier;

b

b) Contain or invoke by reference the technical requirements, including drawings; test and specification requirements; special instructions; and applicable regulations, codes, and industrial standards;

e

c) Identify the documentation (e.g., drawings, specifications, inspection and fabrication plans, inspection and test records, personnel and procedure qualifications, and chemical and physical test results of material) to be prepared, maintained, and submitted to LP&L for review and approval;

c

d) Identify to the extent necessary the LP&L Quality Assurance Program requirements which must be described and met in the supplier/contractor and subtier supplier Quality Assurance Programs;

e

e) Identify those records to be retained, controlled, and maintained by the supplier and those delivered to LP&L prior to use or installation of the item;

d

f) Establish the right of access for LP&L and its agents to the supplier's facilities and records for source inspection and audits;

f

g) Specify when necessary the requirement for suppliers to comply with 10 CFR Part 21 for reporting defects and noncompliances which could create a substantial safety hazard; and

b & 17.2.16.5 17.2.7.8

h) Establish measures for the identification, control, and disposition of items and services that do not meet procurement document requirements.

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LP&L utilizes recognized standards for the procurement of standardized items such as bearings, V-belts, capacitors, resistors, transistors, and lubricating oils. Other items are purchased by part number or recommendations supplied by the original manufacturer or supplier. Items which are covered by industry codes or standards (e.g., welding rod and pressure boundary materials) are purchased in accordance with the applic[illegible]odes and standards. Where commodity or catalogue items are to b[illegible] quality related applications, the procurement documents may specif[illegible] inspections, tests, verifications or documentation requir[illegible]ssure suitability for the intended application.

17.2.4.4 Review and Approval

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17.2.4.3

The Quality Assurance Section and the Plant Quality Group review quality related procurement documents for Waterford-3. This review is conducted to verify:

b

a) Use of the proper source for the technical and quality requirements;

c

b) That appropriate technical and quality requirements are included;

b

c) That the technical and quality requirements can be verified by inspection or other methods; and

c

d) That technical and quality requirements are controlled through a program of planned and systematic actions.

17.2.4.2 P.5

17.2.4.5 Qualified Suppliers List

The Engineering and Systems Development Quality Assurance Group is responsible for establishing and maintaining the Qualified Suppliers List. Prospective vendor/supplier/contractor organizations qualify for inclusion on this list through an evaluation of their quality assurance capabilities for providing quality related items and services. (see Subsection 17.2.7.2 for the basis used in the evaluation). Re-evaluation and requalification of suppliers on the Qualified Suppliers List is made on a periodic basis, as specified in applicable procedures.

17.2.4.5

17.2.4.6 Changes and Revisions

Changes and revisions affecting the technical and/or quality requirements of procurement documents are subject to at least the same review and approval as the original documents.

17.2.5 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

17.2.5.1

17.2.5.1 General

Instructions, procedures, and drawings for the operational phase of Waterford-3 are developed to prescribe those activities that affect the quality related functions. Activities affecting quality, such as designing, procuring, installing, testing, inspecting, operating, maintaining, and modifying are accomplished in accordance with these documents. The Quality Assurance Manual defines requirements for developing and controlling instructions and procedures for quality related activities.

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17.2.5.1

17.2.5.3

17.2.5.2 Preparation of Instructions, Procedures, and Drawings

Procedures are written to provide a controlled method for preparing, reviewing, changing, and approving instructions and procedures. Instructions, procedures, and drawings prescribing quality related activities are prepared by the LP&L organizational unit engaged in that activity, by external consultants or by other LP&L groups as assigned. Appropriate department heads are responsible to provide instructions, procedures, and drawings as required for the administration, operation, maintenance, and modification of Waterford-3.

17.2.5.4

17.2.5.3 Contents of Instructions, Procedures, and Drawings

Instructions and procedures prescribing operational activities that affect quality related functions identify any special equipment and conditions required to perform the activity, provide applicable quantitative and qualitative acceptance criteria, and include provisions for documenting that activities were accomplished in accordance with these instructions. When appropriate, instructions and procedures include checklists of the elements of an activity to be observed or measured.

17.2.5.4 Review and Approval

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17.2.5.5 Instructions, procedures, and drawings prescribing quality related activities are reviewed and approved by the individual in charge of the organization engaged in that activity. Whenever a quality related instruction, procedure, or drawing of one organization affects or involves the activities of another organization, the originating organization is responsible for ensuring that the affected organization reviews and concurs with the document content. The originating organization is responsible for resolving comments.

17.2.5.5 P.2

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17.2.5.2 Instructions, procedures, and drawings for quality related activities are concurred with by the Quality Assurance Section or by the Plant Quality Group. Table 17.2-2 identifies procedures requiring Quality Assurance concurrence. For onsite quality related activities the Plant Quality Group reviews and concurs with test, calibration, special process, maintenance, modification and repair instructions, and work plans.

17.2.5.2 PORC reviews and recommends approval to the Plant Manager of instructions and procedures for quality related activities for plant operation in accordance with the Waterford-3 Technical Specifications (FSAR, Chapter 16). Such documents are not approved for implementation until comments from the above reviews have been resolved. Control of these documents is in accordance with Subsection 17.2.6.

17.2.5.5 P.5

17.2.6 DOCUMENT CONTROL

17.2.6.1 General

17.2.6.1 P.1 Documents and their revisions which control quality related systems, structures, components, and activities are prepared, reviewed by qualified individuals, and approved by authorized personnel before release or issuance in accordance with written procedures. These procedures identify the organizations responsible for the actions and assure that changes to these documents are reviewed and approved by the same groups.

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17.2.6.1 P.2

17.2.6.2 Review and Issuance of Controlled Documents

17.2.6.2 Document control procedures require that documents, including changes, be reviewed for adequacy and approved by authorized persons prior to issuance.
17.2.6.1 This includes a quality assurance review of documents prescribing quality related activities as described in Subsection 17.2.5.4.

17.2.5.3 Controlled documents and revisions generated within LP&L which affect the quality related structures, systems, components, and activities are prepared by the responsible group, consultants, other qualified groups within LP&L, or combinations of these organizations. These documents are reviewed for accuracy and completeness, and for compliance with quality assurance policies and procedures. After review comments have been resolved, the documents are
17.2.5.5 approved by the supervisor of the responsible group, effective dates assigned, and the documents distributed in accordance with applicable procedures and

17.2.6.1 P.2
17.2.6.2.a

instructions. Controlled documents are distributed prior to starting an activity and, if necessary, are on hand at the locations where the prescribed activities are performed before work begins.

17.2.6.3.a

Controlled lists of documents are updated and issued in accordance with applicable procedures to preclude the use of superseded documents. These lists identify the current revision number of the instructions, procedures,

17.2.17.3

specifications, drawings, and procurement specifications. Record copies of the documents are retained in accordance with appropriate records management procedures. Obsolete or superseded documents are controlled by approved

17.2.6.1 P.2

written procedures to prevent inadvertent use.

17.2.6.1 P.2

Changes to quality related documents are reviewed and approved by the same organization that performed the original review and approval or by other qualified responsible organizations delegated by LP&L. Approved changes are included in the instructions, procedures, drawings, and other appropriate documents associated with the change.

17.2.5.2
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17.2.6.2.1 Quality Related Plant Procedures

Administrative procedures prescribe steps involved in the preparation and review of plant procedures. The procedures require that quality related maintenance, modification and test instructions, and procedures prepared by the plant staff be routed to the Plant Quality Group for review and concurrence prior to implementation. The Plant Quality Manager assigns this review to qualified personnel within his group. The review is conducted in

17.2.5.5

accordance with approved procedures to determine:

a) That the need for inspection, identification of inspection personnel, and documentation of inspection results have been properly specified.

b) That the necessary inspection requirements, methods, and acceptance criteria have been identified; and

c) That hold and witness points are clearly identified and acceptance criteria provided.

Prepared checklists or guidelines are used in conducting and documenting the reviews.

17.2.6.2.2 As-built Drawings

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Those drawings required for the safe operation of the plant reflecting the as-built status of Waterford-3 are transferred from the Architect-Engineer to LP&L prior to receipt of the operating license. These drawings are stored in a controlled facility, with reproducible copies of those drawings required for plant operation and maintenance furnished to the Plant Manager. The Project

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17.2.6.6

Management Group is responsible for the revision and update of master drawings to reflect station modifications.

The Project Management Group issues Station Modifications (SMs) which delineate the drawings affected by proposed modifications. The Plant Manager

17.2.6.6 P.6 implements and maintains administrative controls which assure that as-built drawings utilized for plant operation and maintenance are obtained and disseminated upon completion of the related modification. The Nuclear
17.2.6.2 P.4 Operations Quality Assurance Group monitors the status of as-built drawings.

17. .6.6 P.3 Field drawings and sketches may be prepared by plant personnel to clarify or provide additional details for operation, maintenance, or testing, and these are controlled in accordance with written instructions which specify requirements for identifying, reviewing, approving, and filing. They are reviewed for accuracy by at least one qualified person other than the originator. They are reviewed and approved by the originating group supervisor before issuance. Revisions are handled in the same manner as the original issue.

17.2.6.5 17.2.6.3 Types of Controlled Documents

The documents controlled under the Quality Assurance Program include as a minimum:

f a) Safety Analysis Report;

a b) Design documents including calculations, drawings, specifications, change requests, analyses, and documents related to computer codes;

c c) Procurement documents;

i d) Quality Assurance Manual;

e e) Quality Assurance Section Procedures;

d f) Inspection and test procedures for fabrication, construction, installation, test, maintenance, modification, and operation;

g g) Nonconformance Reports;

b h) As-built documents;

i i) Emergency Plans;

i j) Physical Security Plans:

e k) Plant Operating Manual;

e l) Nuclear Services Procedures; and

045 m) Project Management Procedures.
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17.2.7 CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES

17.2.7.1 General

17.2.7.1 Material, equipment, and services whether purchased directly or through others, conform to procurement document specifications as described in Subsection 17.2.4. Provisions are made, as appropriate, for source evaluation and selection, review for objective evidence of quality, inspection at source, and inspection upon delivery. Quality assurance measures of suppliers are assessed at periodic intervals commensurate with the importance, quantity, and complexity of the product or services being purchased. This assessment employs audit, independent inspection or test to verify that documentation 17.2.7.4 such as inspection records and certificates of conformance are valid. Where onsite failures occur, the cause is evaluated to determine if the original 17.2.3.8 P.5 equipment or the original design is appropriate for replacement or repair. Proposals (bids or quotations) by suppliers are reviewed to ensure that no 17.2.4.4 exceptions are taken which would violate safety, technical, or quality requirements. The program requirements for control of purchased material, 17.2.8.2 equipment, and services are contained in approved written procedures.

17.2.7.2 Evaluation of Suppliers

17.2.4.2 P.5 Quality related equipment, materials, and services are obtained from
17.2.7.2 P.6 suppliers, contractors, and consultants on the LP&L Qualified Suppliers List when required to assure compliance with codes, standards, and regulatory commitments. Suppliers, contractors, and consultants are qualified for inclusion on the Qualified Suppliers List through an evaluation of their quality assurance capabilities for providing quality related items and services. The evaluations are conducted by qualified personnel and the results documented and maintained in accordance with quality records management procedures.

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17.2.18.3 P.2

The evaluation of suppliers is based on one or more of the following criteria:

17.2.7.3

a) The supplier's ability to comply with those requirements of the LP&L Quality Assurance Program which are applicable to the type of material, equipment or service being procured;

b) A review of the records and performance of suppliers who have provided articles similar to the type being procured; and

c) A survey of the supplier's facilities and quality assurance program to determine his capability to provide a specified service or to supply a product which meets design, manufacturing, and quality requirements.

LP&L's Corporate Quality Assurance Manager is responsible for establishing and
17.2.7.2 P.6 maintaining the Waterford-3 Qualified Suppliers List. Plant Quality and engineering groups (plant or support personnel) participate in the evaluation
047 of potential suppliers for providing quality related items and services as
DELETED needed. Suppliers of quality related structures, systems, components, and services for Waterford-3 are informed through procurement documents of their
17.2.4.3.f requirement to comply with 10 CFR Part 21 for reporting defects and noncompliances that could create a substantial safety hazard.

17.2.7.3 Surveillance of Suppliers

17.2.7.7.1 P.3
17.2.18.1

Audit and surveillance of quality related suppliers during fabrication, inspection, testing, and shipment of materials, equipment, and components is planned and performed in accordance with written procedures to ensure conformance to the procurement document requirements. These procedures provide for:

a) Instructions that specify the characteristics or processes to be witnessed, inspected or verified, and accepted;

b) The method of surveillance and the extent of documentation required; and

c) The personnel responsible for implementing these instructions;

17.2.7.7.1 P.1
17.2.7.4 P.2

Surveillance is performed on those items where verification of procurement requirements cannot be determined upon receipt. Suppliers' quality related activities including the validity of certificates of conformance are periodically evaluated by audits, independent inspections or tests. The effectiveness of supplier quality control is assessed by LP&L at intervals

17.2.7.4 P.1

consistent with the importance, complexity, and quantity of the item or service being delivered.

17.2.7.4 Receiving Inspection

17.2.7.7.1 P.4

Receiving inspection of material, components, and equipment is performed in accordance with written procedures which provide that:

17.2.7.7.1

a) The material, component or equipment is properly identified and corresponds to the requirements of the procurement documentation;

17.2.7.7.1

b) Material, components, equipment, and records are inspected and judged acceptable in accordance with procurement document requirements prior to installation or use;

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17.2.7.11 P.4

c) Inspection records or certificates of conformance attesting to the quality of material, components, and equipment are available at Waterford-3 prior to installation or use; and

17.2.14.3 P.1
17.2.7.7

d) Accepted and released items have their inspection status identified prior to being forwarded to a controlled storage area or released for installation or further work.

17.2.7.9

17.2.7.5 Procurement of Commercial Items

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Standard commercial material, parts, and equipment that are essential to the quality related functions of structures, systems, and components are reviewed and documented for suitability of application before selection of the item and its supplier. The preparer of the purchase requisition is responsible to clearly identify the commercial item to be procured and list the receiving inspection requirement. The item selected must be equal to or better than the original part. If the part is different from or an addition to the original

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17.2.7.9

design and constitutes a plant modification, the Project Management Group reviews the material application and verifies the part's suitability for the intended use. Any additional inspection or test requirements are specified in the purchase requisition or attachments.

17.2.7.6 Spare and Replacement Parts

17.2.7.10

Spare and replacement parts for quality related systems, structures, and components are subject to present Quality Assurance Program controls and to codes, standards, and technical requirements at least equivalent to or better than those used for the original equipment.

17.2.7.11

17.2.7.7 Records

Quality assurance records, when required by procurement documents, are collected and retained by suppliers of quality related items. Suppliers furnish the following records, as a minimum, to LP&L or its agent:

a) Documentation that identifies the purchased material or equipment and the specific procurement requirements (e.g., codes, standards, specifications) met by the items; and

b) Documentation that identifies any procurement requirements which have not been met, together with a description of those nonconformances dispositioned "accept-as-is" or "repair".

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17.2.7.11 P.2

The review, evaluation, and acceptance of the required supplier records furnished to LP&L are described in procedures. Review and acceptance of the records is performed by the Plant Quality Group personnel.

Documentation is available at Waterford-3 prior to use of purchased material, components or equipment. The documentation is retained in accordance with quality assurance records management procedures.

17.2.8 IDENTIFICATION AND CONTROL OF MATERIALS, PARTS, AND COMPONENTS

17.2.8.1

17.2.8.1 General

The identification and control of quality related materials, parts, and components is accomplished in accordance with written requirements and applies to materials, parts or components in any stage of fabrication, storage, installation, use or removal from use. Procedures define requirements for the

17.2.8.2

identification and control of materials, parts, and components.

Materials, parts, and components identified as nonconforming is handled in

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accordance with Subsection 17.2.15.

17.2.8.2 Requirements for Identification and Control

17.2.8.2.a
17.2.8.3.4

Identification by means of heat numbers, serial numbers, date coding, lot numbers, part numbers or other appropriate means is required by procurement documents. When identification markings are employed, they are clear, unambiguous, and indelible. The inclusion of identification requirements in design documents is checked during design verification by the design organization.

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17.2.8.2

Procedures include provisions to prevent the use of incorrect or defective items by requiring that identification be maintained either on the item or on records traceable to the item. The identification of materials, parts, and components is verified to ensure that only correct and accepted items are used and installed.

17.2.8.2 b-d

17.2.8.3 Traceability

17.2.8.3.1

Purchased materials and parts important to the function of quality related structures, systems, and components are identified to enable the items to be traced to documents such as drawings, specifications, procurement document, manufacturing and inspection documents, deviation reports, and physical and chemical test reports. When traceability is required, identification will be

17.2.8.3.4

maintained for each part of subdivided items either on the part or in the documentation traceable to the part. Replacement parts and materials are similarly identified by coded part numbers to records and documents.

17.2.8.2 P.2

Inventory and issue controls are documented in applicable plant procedures as part of the measures to control purchased items and maintain traceability to plant locations.

17.2.8.4 Responsibility for Identification and Control

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17.2.8.2

The Administrative Manager-Nuclear, Plant Administrative Services Department, provides instructions for the identification and control of items for quality related applications which are received, stored, and issued at the plant site.

17.2.8.2 P.1

The Plant Manager provides instructions for the identification and control of items drawn from stores, installed, or used. The Plant Quality Group ensures that proper documentation accompanies quality related items by surveillance of activities.

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17.2.7.7

17.2.9 CONTROL OF SPECIAL PROCESSES

17.2.9.1

17.2.9.1 General

Special processes, including welding, heat treating, and nondestructive testing are identified and controlled to ensure that they are accomplished according to approved written qualified procedures. Procedures are qualified

17.2.9.4
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in accordance with applicable codes and standards, or, where no appropriate standards exist, to LP&L requirements. As required by applicable codes and standards, personnel performing special processes are qualified and their

qualifications are documented. Applicable codes, standards, specifications, criteria, and other special requirements are identified and used in qualifying procedures and personnel used to accomplish special processes.

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17.2.9.2 Special Processes Subject to Controls

Special processes controlled by the Quality Assurance Program include, but are not limited to, the following as they are applied to quality related items:

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a a) Welding,

b) Heat treating,

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c c) Radiography,

c d) Ultrasonic examination,

c e) Eddy current examination,

c f) Magnetic particle examination,

c g) Liquid penetrant examination,

d h) Chemical cleaning,

e i) Concrete placement (seismic applications),

f j) Cadwelding, and

h k) Protective coatings.

17.2.9.3 Special Process Procedures

17.2.9.4

Procedures for performing special processes are written, qualified, and approved before use. Personnel responsible for performing special processes are qualified to the procedure before implementation. Special process control procedures specify the preparatory steps, processing details, conditions to be maintained during the process, and inspection and testing requirements.

17.2.9.4

17.2.9.4 Qualification of Personnel, Procedures, and/or Equipment

The Quality Assurance Program requires that personnel (both internal and external to LP&L) performing special processes for Waterford-3 are qualified and are using procedures qualified to meet applicable codes, specifications, and standards. Qualifications of personnel and procedures are verified by Quality Assurance and Plant Quality Groups during surveillances or audits.

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Personnel, procedures, and/or equipment connected with special processes are qualified/certified in accordance with applicable codes, standards, and specifications. Qualification/certification may be provided by authorized agencies or by individuals within the LP&L organization who are qualified for

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the special processes to be performed. Certification includes necessary training followed by an examination of each individual. The period of validity for certification of personnel is in accordance with criteria described in applicable codes, standards, and specifications. Personnel failing retest are not allowed to perform the special process pending recertification.

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Table 17.2-1(8)
17.2.9.5

A Level III inspector for the type of nondestructive examination (NDE) process addressed reviews and approves the NDE procedures. For special processes not covered by existing codes or standards, or when the quality requirements exceed the requirements of established codes or standards, the necessary qualifications of personnel, procedures, and/or equipment are defined.

17.2.9.6

17.2.9.5 Records

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17.2.17.3.b
17.2.9.6

Current qualification records of plant special process personnel, procedures, and equipment are maintained by the responsible plant supervisor and reviewed by the Plant Quality Group. Special process control records of vendors may be retained by the vendor or supplied to LP&L as specified by contract or procurement document.

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17.2.10 INSPECTION

17.2.10.1 General

17.2.10.1 P.3

Inspection is performed during maintenance, modification, repair, material receiving, and storage activities affecting quality related items at Waterford-3 in accordance with requirements defined in the Quality Assurance Manual. Maintenance and modification instructions, and work plans are

17.2.10.3 P.3
REF: 059

reviewed by Plant Quality personnel to assure the inclusion of inspection requirements and to verify that methods and criteria are defined.

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17.2.10.2 P.1

The inspection program at Waterford-3 is developed under the direction of the Plant Manager and is implemented by the Plant Quality Manager. Normal inspections are performed by qualified personnel reporting to the Plant Quality Manager. Special inspections, such as nuclear fuel receiving, are

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17.2.10.3 P.4

performed by qualified personnel reporting to the Plant Manager or his designee. For quality related activities (e.g., surveillance testing) where

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direct inspection is not utilized, the Plant Quality Group monitors the activities in accordance with established procedures.

Table 17.2-1
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17.2.10.3 P.5

Inspection requiring expertise in a particular area, such as preservice and inservice inspection, certain nondestructive testing, and containment vessel leak rate tests and inspections, may be conducted by offsite LP&L, Middle South Services or contractor personnel. In such instances, the inspection activities are conducted under the LP&L Quality Assurance Program or under a LP&L approved contractor program.

17.2.10.8

17.2.10.2 Inspection Procedures, Instructions, and Checklists

Inspection requirements are implemented using applicable procedures, instructions, checklists, drawings, and specifications.

Procedures, instructions, and checklists governing inspections provide for the following:

a) Criteria for determining when inspections are required and how they are performed;

b) Acceptance and rejection criteria;

c) Identification of individuals or groups responsible for performing inspections;

d) The points during fabrication, erection, installation, test, operation, or maintenance at which the inspections are to be performed;

e) Identification of characteristics and activities to be performed;

f) A description of the inspection method;

g) Identification of required inspection, measuring, and test equipment;

h) Accuracy requirements for inspection, measuring and test equipment;

i) A method for recording the identity of the recording inspector or data recorder and recording the inspection results and/or observations;

j) A method for recording evidence of completing and verifying a manufacturing, inspection or test operation;

k) Identification of procedures, drawings, and specifications, including revision level used to conduct the inspection.

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The procedure originator is responsible for ensuring that the accuracy requirements of inspection equipment are sufficient to obtain reliable data. The accuracy requirements are based on procurement or plant technical specifications. The Plant Quality Group reviews quality related procedures to verify the inclusion of accuracy requirements of inspection equipment. The individuals performing the inspections are responsible for assuring that the equipment used meets the criteria noted in the procedure. Plant Quality inspectors are responsible for verifying that the inspection equipment meets the criteria of the procedure and that the inspection results are within the acceptance criteria of the procedure.

17.2.10.3 Indirect Inspection

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When it is not possible or practical to verify conformance of processed material or products by direct inspection, indirect control is employed by monitoring processing methods, equipment, and personnel. To ensure adequate

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control, both direct inspection and process monitoring are used when control by only one method is considered inadequate.

17.2.10.7

17.2.10.4 Inspection by Sampling Methods

Sampling inspection methods may be used when tests are destructive or when quality assurance records and inherent characteristics of the item indicate that a reduction in items inspected or tested can be achieved without jeopardizing the assurance of quality. When a sampling method is used to verify acceptability, the sampling procedures provide justification for the sample size and selection process.

17.2.15.7 P.4

17.2.10.5 Inspection of Replaced, Reworked or Repaired Items

Modifications, repairs, and replacements are inspected in accordance with the original design and inspection requirements or acceptable alternatives. Further information on the disposition, inspection, and documentation for repaired or reworked items is contained in Section 17.2.15.

17.2.10.4

17.2.10.6 Inspector Qualifications

Inspectors are qualified through experience, education, and training programs to perform the assigned inspection tasks. Where required, inspectors are formally examined and certified. A file is maintained containing the credentials for each inspector. Inspector qualifications and certifications are kept current.

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17.2.17.b
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The Plant Training Department develops procedures for training programs for Plant Quality Group inspectors. These procedures contain qualification criteria for inspection personnel for the various types of inspections. The Plant Quality Manager is responsible for certification of Plant Quality inspectors.

17.2.10.2

The inspector qualification program is reviewed and concurred with by the Corporate Quality Assurance Manager or his designee.

17.2.10.6

17.2.10.7 Identification of Hold Points

Quality related suppliers and vendors are required through procurement documents where applicable, to submit their manufacturing plans to LP&L, as indicated in the procurement document. This is done prior to manufacture in their shops or shops of their suppliers so that LP&L has the opportunity to identify mandatory inspection hold points for witness by an LP&L representative. Work may not proceed beyond these hold points without LP&L consent.

17.2.10.6 P.1&2

Work plans, procedures, and instructions for maintenance, modification or test of quality related structures, systems or components are reviewed to verify inclusion of inspection requirements, criteria, and hold points. Work in

17.2.10.6 P.3

process does not proceed past the identified hold points without satisfaction of inspection requirements.

17.2.11 TEST CONTROL

17.2.11.1 17.2.11.1 General

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17.2.11.1

Waterford-3 preoperational and startup tests are performed in accordance with the criteria of Regulatory Guide 1.68, as described in Chapter 14 of this FSAR. Following issuance of the operating license, testing is performed to demonstrate that quality related systems and equipment will perform satisfactorily in service and malfunctions are identified in a timely manner. This includes surveillance, functiona', and special tests.

17.2.11.4 Procedures define requirements for control of quality related tests and methods for implementing Quality Assurance Program requirements.

17.2.11.4 Test program procedures include criteria for determining when a test is required and how testing activities are performed. Test program procedures also require system engineers to review specifications provided by the Architect-Engineer, test guidelines supplied by the NSSS vendor and equipment technical manuals in order to determine the test equipment accuracy that is necessary to satisfactorily perform a test.

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17.2.11.4

17.2.11.2 Content of Test Procedures

Written test procedures for structures, systems, and components are prepared in accordance with Regulatory Guides 1.33 and 1.68, as applicable, and provide, as required, for the following:

17.2.11.3 a) The requirements and acceptance limits contained in applicable design and procurement documents;

17.2.11.4 b) Instructions for performing the test;

c) Test prerequisites such as:

1) Calibrated instruments;

2) Adequate and appropriate equipment;

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3) Trained, qualified, and licensed or certified personnel;

4) Completeness of item to be tested;

5) Suitable and controlled environmental conditions;

6) Provisions for data collection and storage; and

7) Status of system.

17.2.11.3 d) Criteria for determining accuracy requirements of test equipment;

068 / 17.2.10.6 / 17.2.11.4 e) Mandatory inspection hold points;

f) Acceptance and rejection criteria;

g) Methods of documenting or recording test data and results;

h) Provisions for assuring test prerequisites have been met; and

069 / 17.2.11.3 i) Provisions for assuring system arrangement is acceptable after test.

070 / 17.2.11.2 Preoperational and startup test procedures are developed by the Waterford-3 Startup Group and Plant Staff with appropriate inputs from the NSSS vendor and the Architect-Engineer.

17.2.11.4 / 17.2.5 / 071 / 17.2.11.2 P.2 Testing activities are performed using test procedures that have been reviewed, approved, and released for execution. Retesting activities are based on reviews and direction by the Joint Test Group or the PORC.

17.2.11.3 Evaluation of Completed Tests

072 / 17.2.11.5 / 17.2.11.6 Completed tests including test results are documented and evaluated by a qualified responsible individual or group. This evaluation determines:

a) That the test results are adequate;

b) That the recorded data reveals the adequacy of the equipment or system to meet the specified requirements in the acceptance criteria; and

c) That nonconforming conditions or conditions which deviate from requirements are reported, evaluated, and corrected.

17.2.11.5 Test data found to be in conformance with the requirements is accepted and approved by a qualified responsible person and appropriately documented.

073 / DELETED The Joint Test Group reviews the results of preoperational tests (Phase II) and makes recommendations regarding acceptability to the Plant Manager. The PORC reviews the results of initial Startup tests (Phase III) and makes recommendations regarding acceptability to the Plant Manager.

17.2.11.2 P.4 The Safety Review Committee reviews the results of special tests in accordance with Waterford-3 Technical Specifications.

17.2.11.6.f If test results do not meet acceptance criteria, the responsible organization initiates appropriate corrective action in accordance with written procedures.

17.2.11.4 Test of Modified, Repaired or Replaced Items

17.2.3.8 Modified, repaired or replaced items of quality related equipment are tested in accordance with the original design and testing requirements or acceptable alternatives.

17.2.11.5 17.2.11.5 Test Records

Test records include report forms completed during tests and identify the person responsible for conducting the test and indicate the date or period when the test was performed. Original test data report forms are reviewed for
17.2.17 completeness, identified, indexed, and stored in accordance with Section 17.2.17.

17.2.12 CONTROL OF MEASURING AND TEST EQUIPMENT

17.2.12.1 General

17.2.12.2 Measuring and test equipment (M&TE) utilized in or related to operation of quality related structures, systems, and equipment is controlled in accordance with written procedures or instructions. These procedures define requirements
17.2.12.1 for control of M&TE, including measuring instruments, test instruments, tools, gauges, reference standards, transfer standards, and nondestructive test equipment used in the measurement, inspection, and monitoring of quality related structures, systems, and components.

Requirements for the control of M&TE apply to M&TE used by the individuals or
17.2.12.1 organizations participating in the installation, inspection, testing or maintenance of quality related structures, systems or components for Waterford-3. The extent to which these requirements apply depends upon the
074 nature and scope of the work to be performed and the importance of the item or
DELETED service involved. LP&L has established and implemented a calibration program for M&TE to be used during preoperational testing and operations.

17.2.12.2 Responsibility

The Plant Manager is responsible for ensuring that the affected groups
17.2.12.2 establish and maintain a calibration control program. The PORC is responsible for reviewing calibration control procedures and for submitting recommendations to the Plant Manager or his designee.

075 The plant department head or supervisor of the group performing or contracting
DELETED calibration activities is responsible for the calibration and control of M&TE under his cognizance. He ensures that the calibration program requirements are fully and effectively implemented within his department or group.

076 The Plant Quality Manager is responsible for the review of calibration
17.2.12.2 P.2 procedures. He is responsible for conducting an inspection/surveillance program of calibration activities as required to assure procedural compliance.

The Corporate Quality Assurance Manager is responsible for performance of audits to verify that the calibration control program meets the requirements of the Quality Assurance Manual and that site procedures are properly implemented.

17.2.12.3 Requirements

17.2.12.1
17.2.12.4.2

The calibration program is designed to ensure the accuracy of M&TE. The calibration program provides for the prompt detection of inaccuracies and timely, effective corrective action. The calibration program includes the following requirements as a minimum:

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17.2.12.4.2

a) Lists of M&TE which specifically identify items under the calibration program.

17.2.12.4.1 P.1

b) Reference standards and documented procedures for calibrating M&TE. Procedures such as published standard practices, written instructions that accompany purchased equipment, or other acceptable instructions may be used.

17.2.12.4.1 P.2

c) Calibration of M&TE is against standards that have an accuracy greater than four times the required accuracy of the equipment being calibrated. When this is not possible, standards have an accuracy that assures the equipment being calibrated will be within required tolerance. The basis for the

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17.2.12.4.1 P.3

calibration is documented and approved by the Assistant Plant Manager, Plant Maintenance and Operations.

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17.2.12.5

d) M&TE is stored, calibrated, and used in environments which will not adversely affect its accuracy.

17.2.12.4.2

e) M&TE is calibrated at prescribed intervals to verify the required accuracy. The interval between calibrations is based upon experience, manufactures' recommendations, inherent stability, purpose or use, and the accuracy required of the equipment. Recalibration is performed on or before the designated calibration date. Reference standards are calibrated by

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qualified organizations.

17.2.12.4.1 P.1

f) M&TE is calibrated using reference standards whose calibration has known valid relationship to nationally recognized standards or accepted values of natural physical constants. If no national standard exists, the basis for calibration is documented.

17.2.12.4.2

g) M&TE is labeled to indicate its control status. The label indicates the date of last calibration, by whom it was calibrated, and when the next

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17.2.12.4.2
17.2.12.2

calibration is due. When labeling is not practical, an identifying code is used. If neither labeling or coding is practical, the calibration procedures provide for monitoring of records to ensure control. M&TE is identified to provide traceability to calibration test data. The methods to be used for identifying the equipment is specified in applicable station procedures.

17.2.12.4.2

h) M&TE found to be out of calibration is identified as nonconforming and removed from service. Equipment tested or calibrated by the nonconforming equipment since the last calibration is identified and sufficient investigations performed to either re-establish the acceptability of the

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17.2.12.4.2
17.2.12.4.2

equipment or to confirm the nonconformance. The results of such investigations are documented. M&TE which has been subjected to possible damage is identified as nonconforming and removed from service until corrective measures are taken. M&TE consistently found to be out of

calibration is identified as nonconforming, removed from service, and repaired or replaced. Lost/misplaced M&TE is treated the same as M&TE found to be out of calibration.

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17.2.12.4.2

i) The following measures are taken for M&TE to maintain accuracy and obtain consistent results:

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17.2.12.4.2

a) Environmental and handling controls;

b) Training and qualification of personnel;

c) Checking calibration status before use;

d) Documenting and recalibrating damaged M&TE; and

e) Limiting use to authorized personnel.

17.2.12.4 Procedures

17.2.12.2

Procedures are established for calibration (technique and frequency), maintenance and control of M&TE (instruments, tools, gauges, fixtures, reference and transfer standards, and nondestructive test equipment) that is used in the measurement, inspection, and monitoring of structures, systems, and components.

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Calibration procedures include at least:

a) The identity of the item to be calibrated;

b) Calibration equipment and reference standards to be used;

c) Checks, tests, measurements, and acceptance tolerances;

d) Sequence of operations;

e) Special instructions, when necessary; and

f) Means for traceability between test equipment and calibration test data.

17.2.12.6

17.2.12.5 Records

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17.2.12.6

The status of M&TE under the calibration program is recorded. Records are maintained to show that established schedules and procedures for the calibration of M&TE have been followed. The records contain a history of calibration or other means of control for each item showing the calibration interval, date of last calibration, and the conformance or nonconformance to required tolerance prior to and following adjustments. Records identify the equipment or reference standard to which the records apply, the procedure or instruction followed in performing the calibration, and the calibration date.

Equipment and identification lists, procedures, calibration records, personnel qualifications, and nonconformance reports are retained as required by codes, standards, and specifications and in accordance with Section 17.2.17.

17.2.17

17.2.13 HANDLING, STORAGE, AND SHIPPING

17.2.13.1

17.2.13.1 General

Quality related items are handled, stored, cleaned, and shipped in a manner to prevent deterioration, contamination, damage, or loss of identification. Procedures are provided for control of these activities. As appropriate, detailed instructions are provided for handling, cleaning, storing, maintaining while stored, and shipping specific items of equipment or material. Under normal circumstances, the manufacturer's instructions or recommendations are followed and are implemented to maintain material integrity and protection. Personnel performing these activities are knowledgeable of the work to be performed and the procedures employed.

17.2.13.6

17.2.13.2 Consumables

Procedural controls are established for chemicals, reagents, fuels, oil, lubricants, and other consumables to assure proper storage, handling, utilization, and disposition.

17.2.13.7

17.2.13.3 Material Handling Equipment

Material handling equipment such as cranes, forklifts, and cables are tested in accordance with established procedures.

17.2.14 INSPECTION, TEST, AND OPERATING STATUS

17.2.14.1 General

The inspection, test, and operating status of structures, systems, and equipment under the scope of the Quality Assurance Program is controlled in accordance with procedures.

17.2.14.2

17.2.14.2 Requirements

17.2.14.2

The Plant Manager develops procedures relating to the operational status of the plant. These procedures require:

17.2.14.4 P.1

a) That the status (inoperative, test or operational) of quality related systems and equipment be indicated; and

17.2.14.3 P.1

b) That the status of inspections and tests performed on quality related systems and equipment be indicated.

17.2.14.3 Identification System

17.2.14.3 P.1 The status of quality related systems and equipment is indicated by stamps, tags, labels, status boards, routing cards, logs, schedules, computerized readouts or a combination thereof. The Technical Specifications establish the
17.2.14.4 P.3 status of quality related structures, systems, and components required for the safe operation of the plant, including provisions for periodic and nonperiodic tests and inspections of various instruments, structures, components, systems or parts of systems.

17.2.14.4 Systems and equipment at the plant are controlled to prevent their inadvertent operation, in accordance with Waterford-3 clearance procedures which specifies the control of status indicators and the authority for application and removal.

17.2.14.4 P.2&3 Plant instructions that require equipment to be removed from service for maintenance, testing or modification specify the equipment associated with these activities so that the appropriate type of clearance may be issued.

17.2.14.3 Required inspections, tests, and operations are performed in accordance with approved procedures. Cognizant plant supervisors, assure that necessary inspections and tests are conducted in their area of responsibility and the status of these inspections and tests is maintained current.

17.2.5 Changes to the requirements of these procedures and instructions, including altering the sequence, are controlled by procedures.

17.2.15 NONCONFORMING MATERIALS, PARTS, OR COMPONENTS

17.2.15.1 General

17.2.15.1 The Quality Assurance Program requires control of quality related nonconforming materials, parts or components. These requirements which control the identification, documentation, segregation, review, disposition, notification to affected organizations, repair, rework, retest, and reinspection of nonconforming materials, parts, components, and, as applicable, activities and services (including computer codes) are defined by procedures.

17.2.15.2 Control of Nonconformances

The Quality Assurance Program provides for the following actions when quality related materials, parts, components, systems, activities, or services do not conform to drawings, specifications, workmanship standards or other applicable documents:

17.2.15.4 a) Identify the nonconforming items and clearly describe the nonconformance;

17.2.15.5 b) Document the nonconformance:

17.2.15.6 c) Segregate from acceptable items (where practical) and identify the nonconforming items until properly dispositioned to prevent their inadvertent use or installation;

17.2.15.7 P.1 d) Review the nonconformance;

17.2.15.7 e) Provide approved written dispositions for the nonconformance;

17.2.15.3 P.1 f) Provide copies of reports which identify the nonconformance for distribution as required by appropriate procedures; and

17.2.15.3 P.1 g) Notify affected organizations.

17.2.15.7 A technical evaluation is made to determine whether a nonconforming item may be accepted "as-is", reworked or repaired to an acceptable condition or rejected. Nuclear Operations Department managers are responsible for
17.2.15.2 P.1 documenting, segregating, dispositioning, and reviewing nonconformances and for ensuring that corrective action is taken by cognizant persons or organizations.

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17.2.15.2 P.2 The Onsite Safety Review Subgroup of the Project Management Department provides an independent review of nonconformances, disposition, and closeout during the operations phase. The Nuclear Operations Quality Assurance Group performs a screening and evaluation, if required, of potential 10 CFR 21 items. Following the reportability determination, the Nuclear Operations Quality Assurance Group reports the item to the NRC.

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17.2.16.2 P.2 The Plant Quality Manager is responsible for conducting inspections to verify adequate implementation of corrective action concerning nonconformances. The
17.2.15.2 P.5 Quality Assurance Section is responsible to conduct reviews and audits to verify the adequacy of control measures for identification, notification, segregation, technical review, disposition, and documentation of nonconformances.

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17.2.15.2 P.5

17.2.15.3 Quality Trends

Nonconformance reports are periodically analyzed by the Quality Assurance Section for quality trends and any significant results reported to the Senior Vice President-Nuclear Operations for review and assessment. Quality trending of plant nonconformances will be provided by the Plant Quality Group reporting the results to the Plant Manager.

17.2.15.7 P.4 17.2.15.4 Repair and Rework of Nonconforming Items

Reworked, repaired, and replaced items are inspected and tested in accordance with the original inspection and test requirements or acceptable alternatives. Nonconforming items are also reinspected in accordance with any additional requirements established by the technical evaluation. The rework, repair or inspection procedure is documented and made part of the inspection records.
17.2.15.4 Rejected items are identified by tagging, and where practical, removed from

the area to preclude further use or installation. Final alternative action in the case of rejected items may be the return of such material/equipment to the supplier or to scrap.

17.2.15.8 17.2.15.5 Records

Documentation of nonconforming materials, parts or components is maintained in accordance with LP&L's quality assurance records management procedures. Information contained in the documentation includes but may not be limited to:

a) Identification of the nonconforming item;

b) Description of the nonconformance;

c) Inspection requirements;

d) Disposition of the nonconformance; and

e) Signature approval for disposition.

17.2.16.1 17.2.16 CORRECTIVE ACTION

17.2.16.1 General

Conditions adverse to quality, such as nonconforming items, equipment failures, malfunctions, deficiencies, and deviations are promptly identified and corrected.

17.2.16.4 Significant conditions adverse to quality are: (1) conditions reportable to the NRC within 24 hours or within 30 days in accordance with the Technical Specifications, (2) conditions reportable under 10 CFR Part 21, (3) any gross or widespread noncompliance with procedural requirements that negates the effectiveness of quality assurance controls, or (4) any condition which has recurred with such a frequency that it indicates past corrective actions (if any) have been ineffective.

17.2.16.2 P.1 Conditions adverse to quality are evaluated, reported to supervision and/or to the Quality Assurance Section, and corrected in a manner consistent with safety. Those conditions adverse to quality determined to be significant are documented, the cause of the condition identified, and corrective action taken to prevent recurrence.

17.2.16.4 P.1

17.2.16.3 Methods for implementing corrective action requirements are documented in procedures.

17.2.16.3 17.2.16.2 Procedural Requirements

Procedures and instructions for corrective action of adverse conditions include provisions for:

a) Each person employed by LP&L to identify and report to his immediate supervisor or a Quality Assurance representative conditions suspected to be adverse to quality within his area of responsibility;

b) Supervisory review and classification of reported conditions adverse to quality;

c) Correction of adverse conditions; and

d) Documenting conditions adverse to quality and initiating corrective action to preclude recurrence.

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REF: 088
17.2.16.2

Corrective action reports become part of the plant quality assurance records. The Plant Quality Manager verifies implementation of corrective action for conditions adverse to quality within the plant (the Corporate Quality Assurance Manager for those external to the plant) and reviews documentation generated by the action before the corrective action report is closed.

17.2.16.3 Significant Conditions Adverse to Quality

090
17.2.16.1
17.2.16.4

For those conditions adverse to quality determined to be significant, the corrective action is reviewed by PORC and approved by the Plant Manager. He has the authority to cause immediate temporary corrective action to be taken. The Quality Assurance Section makes a determination of reportability under 10 CFR Part 21.

REF: 087

17.2.16.5

17.2.16.4 Contractor Responsibility

Contractors performing services or activities pertaining to the quality related portions of the plant or any quality related systems or components are required to comply with LP&L approved procedures which require conditions adverse to quality to be identified, reported, and corrected.

17.2.17 QUALITY ASSURANCE RECORDS

17.2.17.1 General

17.2.17.1
17.2.17.3.f
17.2.17.3 P.1

Quality assurance records are those completed records that furnish documentary evidence of the quality of items or of activities affecting quality and those records required by the Technical Specifications. LP&L has established a quality assurance records management program for Waterford-3. Requirements for control of quality assurance records are defined in procedures.

091
17.2.17.2

The Records and Administrative Manager-Nuclear, Project Management Group is responsible for the management of quality assurance records.

17.2.17.2.b
17.2.17.2.c

Organizations that initiate requests for services or materials are responsible for assuring that the applicable quality assurance records requirements are imposed upon the contractor or supplier/vendor. Each organization responsible for the receipt of quality assurance records designates a responsible person

or group for the review, acceptance, and forwarding for further processing of those quality assurance records they review.

17.2.17.2 Types of Records

17.2.17.3 P.7 Quality assurance records include but are not limited to the following:

a) Records completed during the design and construction of the plant, including design drawings and specifications; construction logs and results of reviews, inspections, tests, audits and monitoring of work performance; procurement documents; material analyses and certifications; NDE records; and other similar documents.

b) Documents and records compiled during operation, including operating logs; maintenance and modification records, reportable occurrences; results of reviews, inspections, tests and material analyses; monitoring of work performance; qualification of personnel, procedures and equipment; procurement documents and specifications; calibration records and nonconformance reports and corrective actions.

17.2.17.3 P.8 17.2.17.3 Inspection and Test Records

Inspection and test records include the following:

a) A description of the type of observation;

b) Evidence of completing and verifying a manufacturing, inspection or test operation;

c) The date and results of the inspection or test;

d) Information related to conditions adverse to quality;

e) Inspector and/or data recorder identification;

f) Evidence regarding the acceptability of the results; and

g) Action taken to resolve any discrepancies noted.

17.2.17.3 P.6 17.2.17.4 Corrections and Supplements

Quality assurance records required by codes and regulations are corrected or supplemented only in accordance with written procedures which provide for appropriate review and approval by the originating organization. The correction or supplement includes the date and the identification of the person authorized to issue each correction or supplement.

17.2.17.5 Retention and Storage of Records

17.2.17.6
17.2.4.3.e
17.2.17.4

Records are maintained current and complete and made available by applicable contractors and suppliers for audit by LP&L or its representative at any reasonable time. Those records are maintained in facilities that provide a suitable environment to minimize deterioration and to prevent damage or loss. Written procedures are provided for records storage and maintenance by contractors and suppliers.

17.2.17.3
17.2.17.5
17.2.17.4

The storage location, preservation, retrieval, transmittal, and disposition of quality assurance records for Waterford-3 is established by procedure. Quality assurance records are identifiable and retrievable. Procedures for retention and storage include requirements for maintenance, preservation, and protection of quality assurance records. These requirements identify methods for maintaining control of, access to, and accountability of records; provide for storing records in a manner to preclude deterioration; provide for security; and provide for record storage facilities which protect the contents from possible destruction by causes such as fire or flooding.

17.2.17.4 P.3

A satisfactory alternative to the establishment of a single record storage facility is the maintenance of a duplicate copy of records in a remote location. Where duplicate storage is employed, the storage area environment will be the prevailing building temperature and humidity.

17.2.17.3 P.4

A listing of the required records is developed and available prior to or with the receipt of the records. The retention times of the records and the location of the record copies of the records is indicated in a records index.

092
DELETED

Records which may not be sent to and stored at the plant but retained by the quality related suppliers and contractors include but are not limited to the following:

a) Permanent records -

1) Design calculations;

2) Verifications of design calculations; and

3) Technical evaluations, analyses, and reports.

b) Non-permanent records -

1) Quality Assurance audits;

2) Vendor audit reports; and

3) Pre-award Quality Assurance surveys.

Procurement documents specify that a manufacturer, supplier, consultant or contractor either retain radiographs produced by them for the life of the project and throughout commercial operation of Waterford-3 or that they send such radiographs to LP&L after being retained in accordance with contractural or code requirements. Radiographs received by LP&L from quality related consultants, contractors, manufacturers, and suppliers are handled and stored in accordance with approved procedures.

17.2.18 AUDITS

17.2.18.1 General

17.2.18.2
17.2.1 P.5
REF: 002

The Corporate Quality Assurance Manager has the authority and organizational freedom (see Section 17.2.1) to schedule and perform internal and external audits of quality related programs and activities during the startup and operation of Waterford-3. Requirements for the audit program are defined in the Quality Assurance Manual and procedures for its implementation are contained in the Quality Assurance Section Procedures Manual.

17.2.13.1
17.2.1.3.0.1.e

The audit system is designed to satisfy the requirements of 10 CFR 50, Appendix B, and the Technical Specifications. The Senior Vice President-Nuclear Operations has delegated to the Corporate Quality Assurance Manager the responsibility and authority to plan, schedule, conduct, and report audits of activities associated with quality related functions of Waterford-3.

17.2.18.3

Objectives of the audit program are:

a) To ensure that the LP&L Quality Assurance Program is defined and documented;

b) To verify on a regular basis by examination and evaluation of objective evidence that established requirements, methods, procedures, and instructions are being implemented;

c) To assess the effectiveness of the Quality Assurance Program;

d) To identify program weaknesses and nonconformances; and

e) To verify correction of identified adverse conditions.

17.2.18.2 Audit Scope

17.2.18.3 P.2

Audits are conducted to verify that procedures and activities of LP&L organizations and its contractors/suppliers comply with the Quality Assurance Program requirements. Audits are performed by the Quality Assurance Section to provide a comprehensive independent verification and evaluation of quality related procedures and activities. Additional audits are performed as required to verify and evaluate supplier Quality Assurance Programs, procedures, activities, and interface controls.

17.2.18.3 P.3

Audits include objective evaluation of work areas, activities, and processes; and the review of documents and records. Audits also include an objective evaluation of quality related practices, procedures, and instructions; the effectiveness of their implementation, and the compliance with policy directives.

17.2.18.3 P.4 Audits are performed in areas where 10 CFR 50, Appendix B, requirements are being implemented. These areas include, as a minimum, the quality related activities associated with:

REF: 001

a) Startup, operation, maintenance, and modification;

b) The preparation, review, approval, and control of designs, specifications, procurement documents, instructions, procedures, and drawings;

c) Receipt inspection;

d) Indoctrination and training programs;

e) Implementation of operating and test procedures;

f) Calibration of measuring and test equipment; and

g) Interface control among LP&L organizations and contractors/consultants.

In addition to the above, audits are conducted of the Radiological Environmental Monitoring Program, the Emergency Plan, the Fire Protection Plan, the Security Plan, and any other areas required by LP&L Management, the Corporate Quality Assurance Manager or regulatory agencies. These audits are conducted in accordance with requirements of the guidance documents listed in Table 17.2-1.

TBL 17.2-1 (16)

17.2.18.3 Audit Planning and Scheduling

17.2.18.2 P.1

17.2.18.4

TBL 17.2-1 (2)

17.2.18.4

17.2.18.2

The Corporate Quality Assurance Manager is responsible for determining the need for audits of quality related programs and activities. The audit program includes a documented schedule of audits showing the organizations to be audited, the dates of the audits, and the areas to be audited in accordance with regulatory position C.4 of Regulatory Guide 1.33 and Section 6 of the Waterford-3 Technical Specifications. Audits are scheduled based on the status and safety importance of the activities to be audited. Audit frequency is determined by the requirement to ensure effective quality assurance during the startup testing and operational phases. The audit schedule is approved by the Corporate Quality Assurance Manager.

71.2.18.5 P.1

093

17.2.18.5

Quality Assurance audits are planned and conducted in accordance with approved procedures. Audit planning includes preparation of checklists or procedures that will ensure consistency and completeness in the evaluation. Unresolved items noted during previous audits are reviewed prior to checklist preparation and included for reaudit as appropriate.

17.2.18.6

17.2.18.4 Audit Performance

094

TBL 17.2-1 (16)

17.2.18.6

Audits are performed using prepared checklists or audit procedures. The audit checklist is a guide and does not restrict the audit scope when additional investigation is needed. Audit notification, pre-audit conference, audit process, and post-audit conference is in accordance with established procedures.

17.2.18.5 Audit Personnel

095
TBL 17.2-1 (16) (17)
17.2.18.1
096
17.2.2.6
TBL 17.2-1 (16)

Audits are conducted by qualified LP&L auditors who are experienced, trained, and familiar with requirements and standards applicable to the area or activity being audited. Audit team members are independent of any direct responsibilities for the activities which they audit. Auditors participate in the LP&L Auditor Training Program and maintain proficiency through review and study of codes and standards related to quality assurance and through active participation in the audit program. LP&L lead auditors are certified in accordance with Regulatory Guide 1.146. Audit teams may include consultants and technical specialists not certified as auditors so long as they are under direct supervision of a certified lead auditor.

17.2.18.6 Audit Reporting and Follow-up

17.2.18.7
17.2.18.6
TBL 17.2-1 (16)
097
17.2.18.7
17.2.18.2
17.2.18.8 P.1
17.2.18.8 P.2
17.2.18.9

Audit procedures require that upon completion of an audit, findings are reported to responsible management of the organization audited. Any audit finding which requires immediate resolution is reported without delay to appropriate supervision. Audit findings are discussed in the exit interview. Formal audit reports are issued within 30 working days of the exit interview. Distribution includes the Senior Vice President-Nuclear Operations, the Corporate Quality Assurance Manager and the manager responsible for corrective action in the area audited. It is the responsibility of the cognizant manager to review the audit report and to take action as necessary to ensure that corrective action is accomplished in a timely manner. The responsible Quality Assurance group manager or the audit team leader is responsible for follow-up action (including reaudits) as required to ensure that corrective action has been taken and is effective. Audit findings are documented in the audit report and corrective actions and reaudits are documented with reference to the original audit.

098
17.2.1.1 P.2
17.2.2.8
TBL 17.2-1 (4-3)

17.2.18.7 Management Audits

An independent review and evaluation of the Quality Assurance Program is performed annually at the direction of the Senior Vice President-Nuclear Operations. In combination with regular reports and assessments provided by the Corporate Quality Assurance Manager, these program audits enable the Senior Vice President-Operations to adequately evaluate the effectiveness of the Quality Assurance Program.

099
17.2.1.3.0.1m
17.2.1.1 P.2

17.2.18.8 Analysis of Audit Data

Audit data is analyzed by the Corporate Quality Assurance Manager who reports any significant quality problems and the effectiveness of the Quality Assurance Program, including the need for reaudit of deficient areas, to the Senior Vice President-Nuclear Operations.

TABLE 17.2-1 (Sheet 1 of 7)

REGULATORY GUIDANCE DOCUMENTS

Document	Comment
1. Appendix B to 10 CFR 50 - "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants"	No exceptions.
2. A. Regulatory Guide 1.8, Revision 1-R, September 1975, "Personnel Selection and Training" (Endorses ANSI N18.1-1971)	1. The qualifications of personnel in the Health Physics, Radwaste, and Chemistry Departments are in accordance with ANSI N18.1-1971 as endorsed by this Regulatory Guide and/or as shown in FSAR Chapter 13.
B. ANSI/ANS 3.1-1978, "Standard for Selection and Training of Personnel for Nuclear Power Plants"	2. The qualifications of personnel other than those in the Health Physics, Radwaste and Chemistry Departments are in accordance with ANSI/ANS 3.1-1978. Specific commitments are shown in FSAR Chapter 13. 3. Members of the Independent Safety Engineering Group meet the qualification requirements of NUREG-0731-1980 instead of section 4.7.2 of ANSI/ANS 3.1-1978.

TABLE 17.2-1 (Sheet 2 of 7)

REGULATORY GUIDANCE DOCUMENTS

Document	Comment
3. Regulatory Guide 1.30, August 1972, "Quality Assurance Requirements for the Installation, Inspection and Testing of Instrumentation and Electrical Equipment" (Endorses ANSI N45.2.4-1972)	1. LP&L applies the provisions of this Regulatory Guide and its endorsed standard to Class 1E equipment only. 2. Each quality related item of process instrumentation is identified with a unique number. This number is used in instrument maintenance records so that current calibration status, including data such as the date of the calibration and identity of the person that performed the calibration, can be readily determined. Such information may also be contained on tags or labels that may be attached to installed instrumentation.
4. Regulatory Guide 1.33, Rev. 2, February 1978, "Quality Assurance Program Requirements (Operations)" (Endorses ANSI N18.7-1976)	1. ANSI N18.7 references certain other standards to which LP&L takes exception. LP&L's exceptions and appropriate alternatives are listed in this table. 2. LP&L complies with Regulatory Position C.3 of Regulatory Guide 1.33 except under emergency conditions in which case LP&L shall submit proposed changes to Technical Specifications or license amendments in accordance with 10 CFR 50.54 and/or 10 CFR 50.71.

TABLE 17.2-1 (Sheet 3 of 7)

REGULATORY GUIDANCE DOCUMENTS

Document	Comment
101 4. TBL 17.2-1 (4-3)	3. ANSI N18.7, Section 5.2.7, Maintenance and Modification: LP&L prepares and performs maintenance of equipment in accordance with written procedures except in emergency or abnormal conditions where immediate action is required to: a. Protect the health and safety of the public. b. Protect equipment or personnel. c. Prevent the deterioration of plant conditions to a potentially unsafe or unstable level.
4	4. ANSI N18.7, Section 5.2.7.1, Maintenance Program: Repair of quality related equipment will be accomplished in accordance with approved procedures and/or vendor manuals.
5	5. LP&L will provide procedures for the activities in Appendix A of Regulatory Guide 1.33 as discussed in Section C-1 of this Regulatory Guide. However, LP&L does not consider all activities listed to be "safety related" (e.g., activities in 7.e).
6	

TABLE 17.2-1 (Sheet 4 of 7)

REGULATORY GUIDANCE DOCUMENTS

Document	Comment
5. Regulatory Guide 1.37, March 1973, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water Cooled Nuclear Plants" (Endorses ANSI N45.2.1-1973)	No exceptions.
6. Regulatory Guide 1.38, Rev. 2, May 1977, "Quality Assurance Requirements for Packaging, Shipping and Receiving, Storage and Handling of Items for Water Cooled Nuclear Power Plants" (Endorses ANSI N45.2.2-1972)	For the storage of new fuel assemblies and neutron startup sources, LP&L commits to the storage requirements of Level B of ANSI N45.2.2-1972 less the flooding prevention requirements and will minimize dust and other particles contacting these items by placing a fire retardant polyethylene cover over these items or the cell locations in which the items are stored.
7. Regulatory Guide 1.39, Rev. 2, September 1977, "Housekeeping Requirements for Water Cooled Nuclear Power Plants" (Endorses ANSI N45.2.3-1973)	The zone designations of Section 2.1 of N45.2.3-1973 and the requirements associated with each zone are not consistent with the requirements for an operating plant. Instead, procedures or instructions for housekeeping activities which include the applicable requirements outlined in Section 2.1 of N45.2.3 and which take into account radiation control considerations, security considerations, and personnel and equipment safety considerations are developed on a case basis.

TABLE 17.2-1 (Sheet 5 of 7)

REGULATORY GUIDANCE DOCUMENTS

	Document	Comment
102 TBL 17.2-1 (8)	8. Regulatory Guide 1.58, Rev. 1, September 1980, "Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel" (Endorses ANSI N45.2.6-1978)	Startup testing personnel are qualified to Regulatory Guide 1.58, Rev. 0, August 1973 as described in Section 14.2 of the Waterford-3 FSAR with the exception that the required physical reexamination will be performed every two years and not annually as specified.
	9. Regulatory Guide 1.64, Rev. 2, June 1976, "Quality Assurance Requirements for the Design of Nuclear Power Plants" (Endorses ANSI N45.2.11-1974)	No exceptions.
	10. Regulatory Guide 1.70, Rev. 2, September 1975, "Standard Format and Contents of Safety Analysis Reports for Nuclear Power Plants"	No exceptions.
	11. Regulatory Guide 1.74, February 1974, "Quality Assurance Terms and Definitions" (Endorses ANSI N45.2.10-1973)	No exceptions.
	12. Regulatory Guide 1.88, Rev. 2, October 1976, "Collection, Storage and Maintenance of Nuclear Power Plant Quality Assurance Records" (Endorses ANSI N45.2.9-1974)	No exceptions.

TABLE 17.2-1 (Sheet 6 of 7)

REGULATORY GUIDANCE DOCUMENTS

	Document	Comment
TBL 17.2-1 (13)	13. Regulatory Guide 1.94, Rev. 1, April 1976, "Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During Construction Phase of Nuclear Power Plants" (Endorses ANSI N45.2.5-1974)	a) No exceptions during construction phase. b) LP&L takes exception to the following paragraphs of N45.2.5: 1. 4.8 In-process tests on concrete and reinforcing steel - table B required in-process tests. The course and fine aggregate in-process tests will not be performed during the maintenance and modification program due to the small quantity of concrete to be produced. The aggregates will be tested for conformance to ASTM-C-33 where purchased.
	14. Regulatory Guide 1.116, Rev. 0-R, May 1977, "Quality Assurance Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems" (Endorses ANSI N45.2.8-1975)	No exceptions.
	15. Regulatory Guide 1.123, Rev. 1, July 1977, "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants" (Endorses ANSI N45.2.13-1976)	No exceptions.
	16. Regulatory Guide 1.144, Rev. 1, September 1980, "Auditing of Quality Assurance Programs for Nuclear Power Plants" (Endorses ANSI N45.2.12-1977)	LP&L takes exception to the following paragraphs of N45.2.12: 1. 2.3 - Training - Technical Specialists who assist in performing audits in their area of special expertise will not necessarily be trained in audit techniques; however, they will always be accompanied by a trained and qualified auditor.

TABLE 17.2-1 (Sheet 7 of 7)

REGULATORY GUIDANCE DOCUMENTS

Document	Comment
16.	2. 4.4 - Reports - Audit reports will be issued within 30 working days of the post audit meeting.
17. Regulatory Guide 1.146, August 1980, "Qualifications of Quality Assurance Program Audit Personnel for Nuclear Power Plants" (Endorses ANSI N45.2.23-1978)	No exceptions.

TABLE 17.2-2 (Sheet 1 of 3)

LP&L NUCLEAR OPERATIONS QUALITY ASSURANCE PROGRAM DOCUMENTATION

	Identification	Description	Approval and Control
1	1. FSAR Chapter 17.2, "Quality Assurance During the Operating Phase"	A description of the Nuclear Operations Quality Assurance Program.	Prepared by the Quality Assurance Section and coordinated with plant operations and support organizations. Approved by the Senior Vice President-Nuclear Operations and controlled by Licensing.
REF: 002	2. Quality Assurance Manual	The Quality Assurance Manual defines the Nuclear Operations Quality Assurance Program, assigns responsibilities to various LP&L organizations for program implementation, and defines requirements for quality related activities.	Prepared by the Quality Assurance Section. Coordinated with affected organizations and submitted to the Senior Vice President-Nuclear Operations for approval by the Corporate Quality Assurance Manager. Issued and controlled by the Quality Assurance Section.
4	3. Waterford-3 Plant Operating Manual	A manual consisting of a set of procedures which prescribe required aspects of plant management and operation. This manual provides the mechanism through which the administrative controls and quality assurance requirements are implemented during the operation of Waterford-3.	Prepared by cognizant plant groups/departments. Reviewed by the Plant Quality Department and PORC. Approved by the Plant Manager. Issued and controlled by plant document control. Selected procedures that implement the QA Program require review and concurrence by the Corporate QA Manager or his designee before issue.

TABLE 17.2-2 (Sheet 2 of 3)

LP&L NUCLEAR OPERATIONS QUALITY ASSURANCE PROGRAM DOCUMENTATION

	Identification	Description	Approval and Control
5	4. Quality Assurance Section Procedures Manual	A set of procedures (QASPs) prepared and issued to specify and control the internal activities of the Quality Assurance Section. Included are procedures for nuclear procurement activities performed by the Corporate Purchasing and Materials section.	Prepared, issued, and controlled by the Quality Assurance Section. Coordinated with other organizations as applicable. Approved by the Corporate Quality Assurance Manager.
10			
REF: 001 DELETED	5. Startup Administrative Procedures	A set of procedures (SAPs) which identify to LP&L contractor groups and others, their respective responsibilities and the procedures which govern the administration of the Startup Test Program. These administrative procedures govern startup activities, prescribe areas of responsibility, identify the tasks to be performed, and outline the interface procedures.	Prepared by cognizant individuals in the Startup Group. Reviewed by the Startup Joint Test Group and approved by the Startup Manager. Issued and controlled by Startup Document Control. Procedures which govern quality related activities are reviewed and concurred with by the Quality Assurance Manager or his designee before issue.

TABLE 17.2-2 (Sheet 3 of 3)

LP&L NUCLEAR OPERATIONS QUALITY ASSURANCE PROGRAM DOCUMENTATION

	Identification	Description	Approval and Control
REF: 045 DELETED	6. Project Management Procedures	A set of procedures which prescribe activities and responsibilities within the Project Management Group.	Prepared by cognizant personnel within the Project Management Group. Approved, issued, and controlled by the Project Manager and concurred with by the Corporate Quality Assurance Manager.
6	7. Nuclear Services Procedures	A set of procedures which prescribe activities and responsibilites within the Nuclear Services Group.	Prepared by cognizant personnel within the Nuclear Services Group. Approved, issued, and controlled by the Nuclear Services Manager and concurred with by the Corporate Quality Assurance Manager.

NOTE: See added procedures

TABLE 17.2-3 (Sheet 1 of 3)

QUALITY ASSURANCE MANUAL

COMPLIANCE WITH 10 CFR 50, APPENDIX B

10 CFR 50, Appendix B Criterion		Quality Assurance Manual	
I.	Organization	Chapter-1.0	Defines the organizational structure and delineates the authority and responsibilities of individuals and organizations performing quality assurance activities.
II.	Quality Assurance Program	Chapter-2.0	Defines the scope of the Quality Assurance Program and establishes that activities affecting quality related structures, systems, and components will be conducted in accordance with approved procedures.
III.	Design Control	Chapter-3.0	Defines requirements for the control of the design of quality related structures, systems, and components including the design of plant modifications.
IV.	Procurement Document Control	Chapter-4.0	Defines requirements for the control of procurement of quality related structures, systems, components, materials, and services.
V.	Instructions, Procedures, and Drawings	Chapter-5.0	Defines requirements for the development and control of instructions, procedures, and drawings.

TABLE 17.2-3 (Sheet 2 of 3)

QUALITY ASSURANCE MANUAL

COMPLIANCE WITH 10 CFR 50, APPENDIX B

10 CFR 50, Appendix B Criterion		Quality Assurance Manual	
VI.	Document Control	Chapter-6.0	Defines requirements for the control of documents for quality related structures, systems, and components and identifies the types of documents to be controlled.
VII.	Control of Purchased Material, Equipment, and Services	Chapter-7.0	Defines requirements for control of purchased material, equipment, and services, including control of suppliers and receiving inspection.
VIII.	Identification and Control of Materials, Parts, and Components	Chapter-8.0	Defines requirements for control of materials, parts and components.
IX.	Control of Special Processes	Chapter-9.0	Defines requirements for control of special processes including welding, heat treating, NDE, and chemical cleaning.
X.	Inspection	Chapter-10.0	Defines requirements for inspection of materials and activities important to safety including criteria for determining when and how inspections are performed.
XI.	Test Control	Chapter-11.0	Describes the scope of the test control program and establishes requirements for test procedures and instructions.

TABLE 17.2-3 (Sheet 3 of 3)

QUALITY ASSURANCE MANUAL

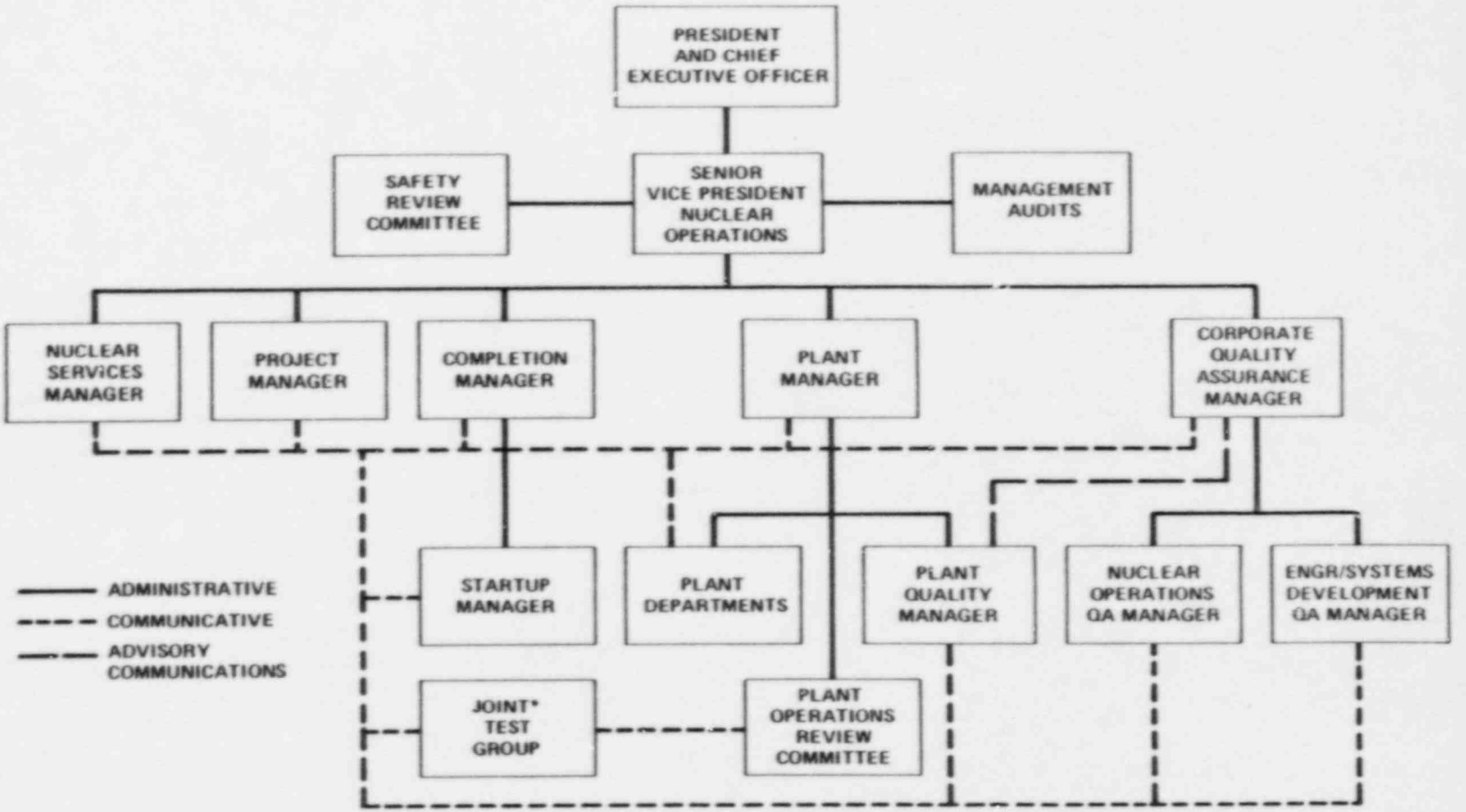
COMPLIANCE WITH 10 CFR 50, APPENDIX B

10 CFR 50, Appendix B Criterion		Quality Assurance Manual	
XII.	Control of Measuring and Test Equipment	Chapter-12.0	Defines requirements for control of measuring and test equipment used for inspections, tests, and monitoring of quality related equipment and activities.
XIII.	Handling, Storage, and Shipping	Chapter-13.0	Defines requirements for handling, storage, and shipping of quality related structures, systems and components.
XIV.	Inspection, Test, and Operating Status	Chapter-14.0	Defines requirements for control of inspection, test, and operating status of quality related items and equipment.
XV.	Nonconforming Material, Parts, or Components	Chapter-15.0	Defines requirements for identification, documentation, segregation, review, and disposition of nonconforming materials, parts, and components.
XVI.	Corrective Action	Chapter-16.0	Defines requirements for establishment of an effective corrective action program with followup to verify proper implementation.
XVII.	Quality Assurance Records	Chapter-17.0	Defines requirements for a quality related records program including identification of types and content of records.
XVIII.	Audits	Chapter-18.0	Defines requirements for audits of quality related activities including audit program scope and methods.

REF: 001
FIG. 17.2-1
PG. 17.2-61

LOUISIANA POWER & LIGHT CO.
Waterford Steam Electric Station

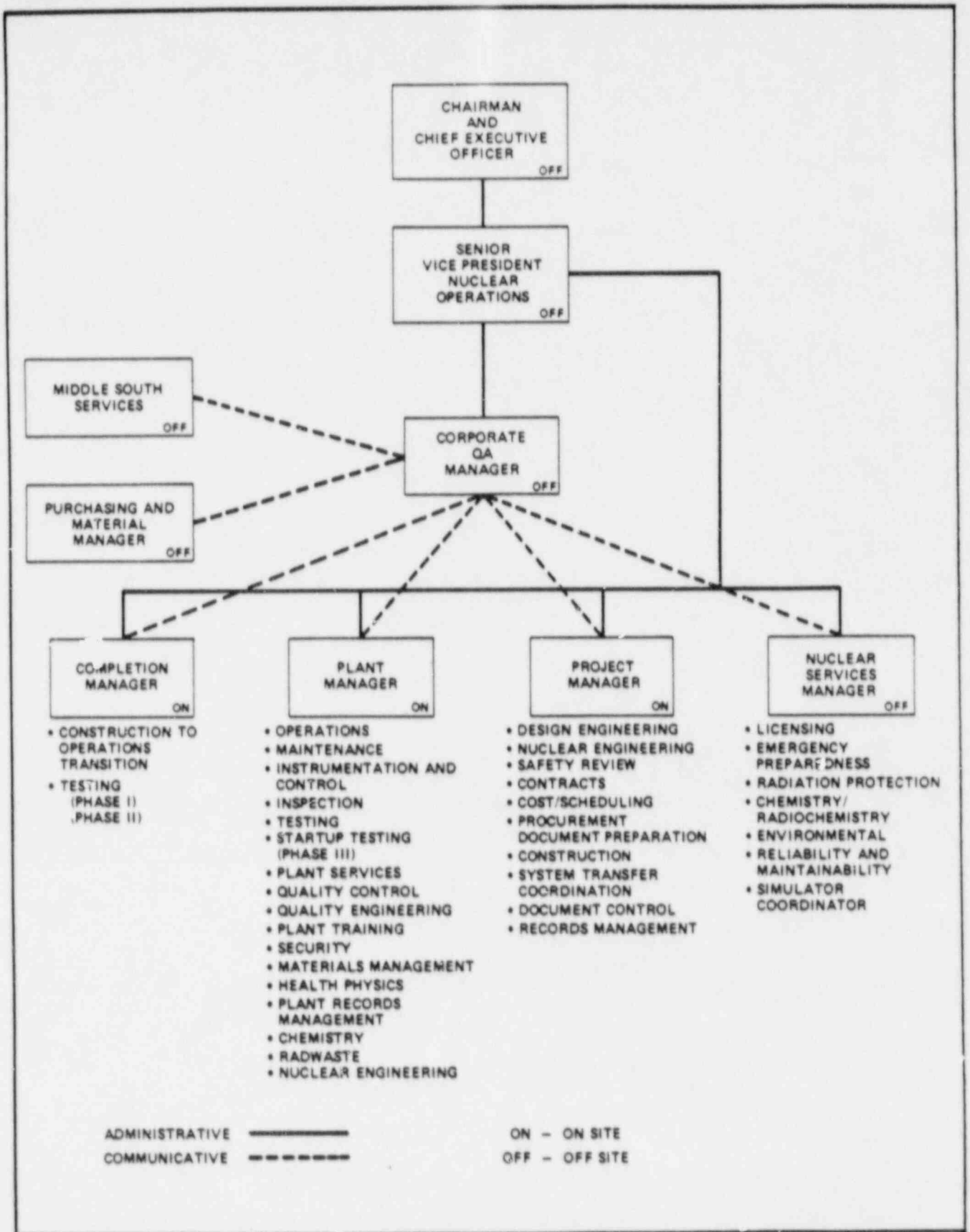
CORPORATE ORGANIZATION FOR OPERATIONS NUCLEAR QUALITY ASSURANCE



*THE JTG WILL EXIST UNTIL WATERFORD 3 IS OPERATIONAL.

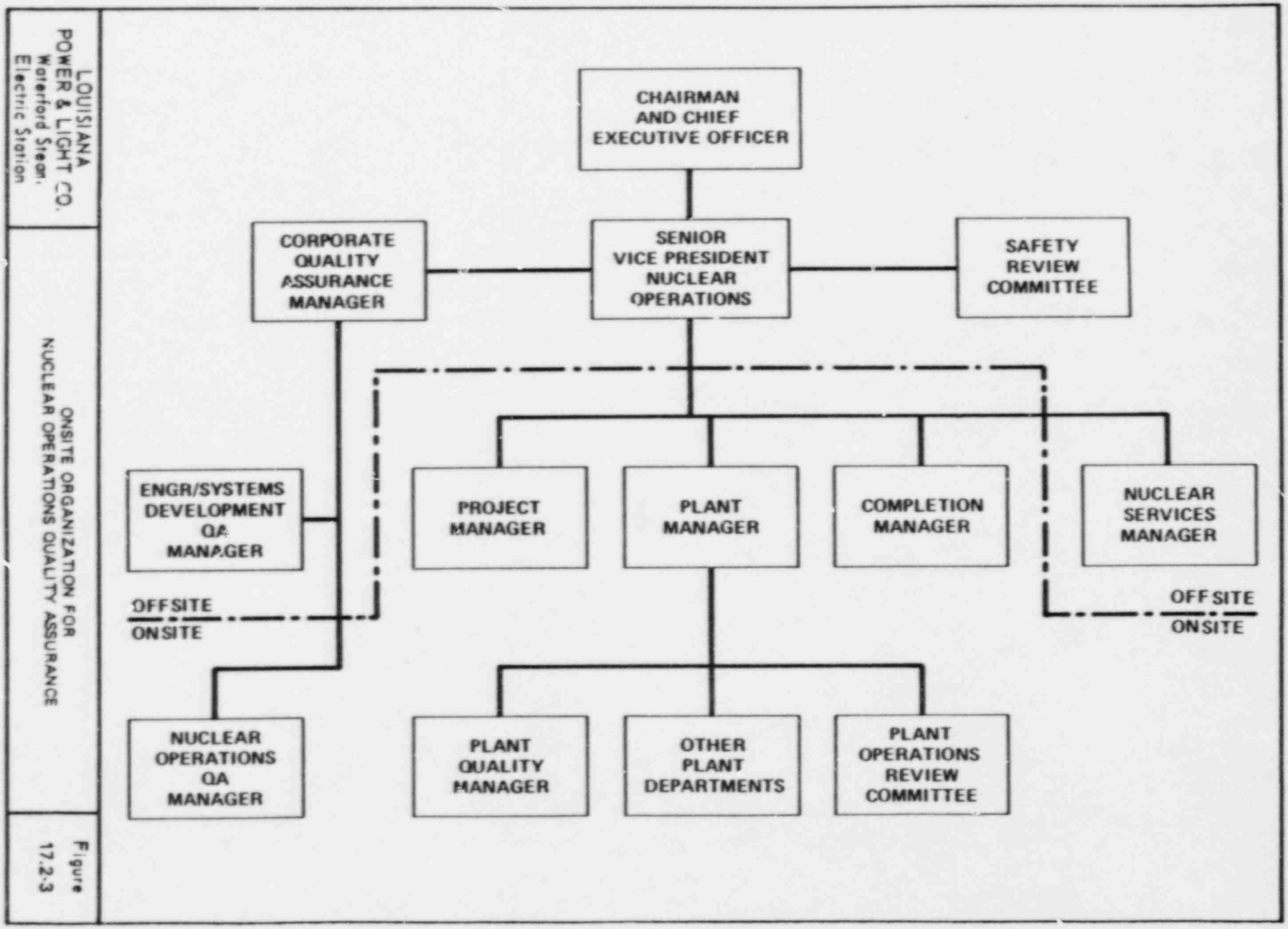
Figure 17.2-1

REF: 001
FIG. 17.2-2
PG. 17.2-62



LOUISIANA POWER & LIGHT CO. Waterford Steam Electric Station	ORGANIZATION AFFECTING QUALITY DURING PREOPERATIONAL TESTING AND OPERATIONS	Figure 17.2-2

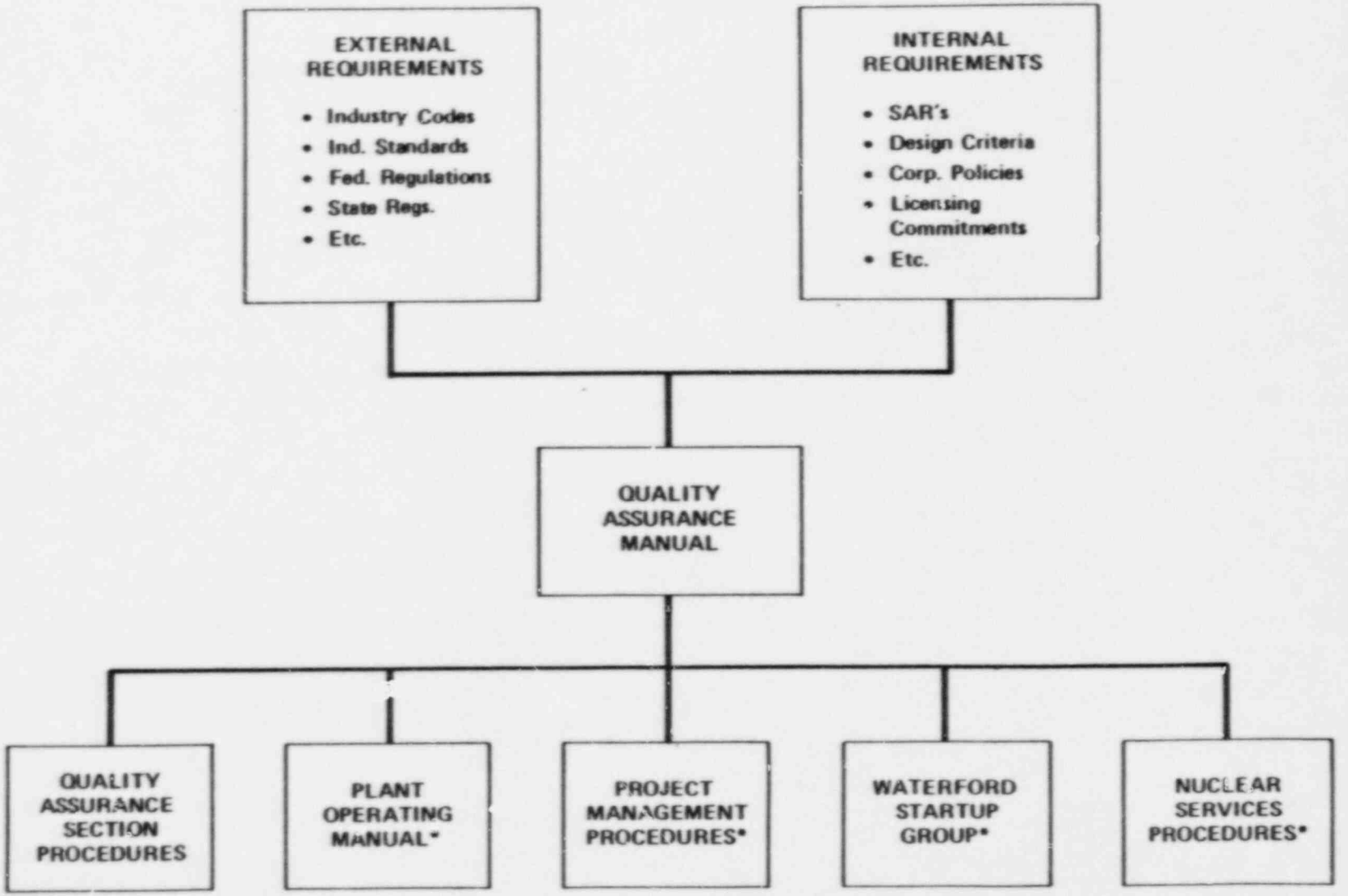
DELETED
REF: 17.2-2
PG. 17.2-62



REF FIG. 17.2-3
PG. 17.2-63

LOUISIANA POWER & LIGHT CO.
Waterford Steam Electric Station

HIERARCHY OF QUALITY RELATED REQUIREMENTS, PROGRAMS, AND PROCEDURES



*SELECTED PROCEDURES THAT IMPLEMENT THE QA PROGRAM REQUIRE REVIEW AND CONCURRENCE BY THE CORPORATE QA MANAGER OR HIS DESIGNEE.

Figure 17.2-4

REMARKS DOCUMENT

COMMENT	DESCRIPTION
001	This revision incorporates the deletion of references to construction and start-up testing and reflects the reorganization of the Nuclear Operations Department.
002	The Corporate level quality policies presently contained in Section V and VI of the Nuclear Operations Management Manual (NOMM) have replaced the Nuclear Operations Department Quality Assurance Manual. Sections V and VI of the NOMM define the Nuclear Operations Department Quality Assurance Program. The accessibility to the QA program description has been enhanced by the inclusion into the NOMM. Additionally, all Nuclear Operations Sr. Management are responsible to concur/approve the NOMM thereby assuring their ongoing cognizance of the QA Program.
003	The term "safety related" has replaced "quality related" throughout this revision, however the scope of the activities remains unchanged. The current usage of the term "safety related" in 17.2.2.4 is more consistent with LP&L QA Program documentation and provides LP&L management the option of applying 10CFR50, Appendix B criteria to "non-safety related" activities by categorizing the activity as "quality related". The Nuclear Operations Management Manual provides the definitions and scope of quality and safety related as they relate to the LP&L Nuclear Quality Program.
004	Verification activities are performed by individuals other than personnel in the Quality Assurance Group. Verifications in the form of inspections are performed by plant staff personnel as described in the Technical Specifications. Other verifications such as surveillances may be performed by groups such as ISEG or engineering. The Quality Assurance Group currently performs audits, reviews, inspections and surveillances as required.
005	Those individuals or organizations no longer applicable since the commencement of the operations phase have been deleted. The remaining individuals and organizations have been listed in the following paragraphs.
006	This change documents the reorganization of the Nuclear Operations Department at the Senior Manager level.
007	This sub-section was relocated to Section 17.2.2 where it is more applicable. Reference comment 098 for basis of change.

COMMENT	DESCRIPTION
008	Editorial change only. This paragraph does not contain additional responsibilities or requirements.
009	Ref. Attachment #2, 17.2.1.2.5.1 and 17.2.1.2.6. The responsibilities for the Nuclear QA Manager and the Nuclear Operations Plant Manager to serve as members of the Safety Review Committee have been deleted. As shown in Attachment #1, 17.2.1.1, the Sr. Vice President - Nuclear Operations appoints the Chairman and members of the Safety Review Committee. The Waterford 3 Technical Specifications define the membership qualification requirements as ANSI/ANS 3.1 - 1978, Section 4.7. The Sr. Vice President utilizes these guidelines in his selection of SRC members.
010	This responsibility was deleted because it was a duplication of item c.
011	Based on inquiries regarding the change of the qualification requirements for the Nuclear Quality Assurance Manager during the NRC review of the December, 1987 QA Program submittal, LP&L will submit a change to revert to those listed in the previously accepted QA Program description (FUSAR, 12/18/86). The qualification requirements will read as follows: The principal qualifications for the Nuclear Quality Assurance Manager will include as a minimum: a) Graduate of a college or university with a Bachelor's degree in an engineering, science or related field, or equivalent capabilities; b) A minimum of four years experience in quality assurance or a quality assurance related activity with at least two of those years in the nuclear power industry as a manager or supervisor; c) Experience in development and implementation of quality assurance programs, plans, and procedures; d) Expertise in interpretation and application of Appendix B to 10 CFR 50 and related codes, standards, and regulatory guides; e) Knowledge of inspection and nondestructive testing requirements; f) Ability to plan, to organize, and to administer a Quality Assurance Program; and g) Ability to maintain an effective working relationship with employees, contractors, suppliers, government agencies, and the public.

COMMENT	DESCRIPTION
012	The references to sections under the control of the Nuclear Quality Assurance Manager were deleted. The responsibilities previously contained in the QA Section Manager's descriptions were moved to the Nuclear QA Manager's description throughout the QA Program description.
013	The Plant Quality Group was reorganized into the Quality Assurance Group during the reorganization of the Nuclear Operations Department.
014	Reference Figure 17.2-2. The Plant Manager currently reports to the Vice President - Nuclear. The managers reporting to the Vice President - Nuclear have been added, and the responsibilities have been redistributed as shown.
015	Deleted. Ref. 009
016	The Plant Quality Manager position was deleted during the reorganization. The responsibilities have been redistributed as shown.
017	This section was deleted. The responsibilities have been redistributed as shown.
018	The position of Plant Quality Manager was deleted. The responsibilities have been redistributed as shown.
019	The Project Manager - Nuclear position as previously defined was deleted. The responsibilities have been redistributed as shown.
020	This responsibility is common to all of the Nuclear Operation's organizations.
021	This responsibility was deleted. Scheduling is performed by the Planning and Scheduling section under the Plant Manager - Nuclear and under the Vice President - Nuclear.
022	This construction responsibility was deleted.
023	These responsibilities were deleted because they were either completed and are not on-going, or do not require Nuclear Services support.

COMMENT	DESCRIPTION
024	The Completion Manager - Nuclear position was deleted. There are no operational responsibilities associated with this position.
025	Also reference comment 002. The Quality Assurance Policies are presently contained in Section V & VI of the Nuclear Operations Management Manual which is a controlled manual.
026	The specific departmental/section level procedures have been reorganized as shown in Table 17.2-2.
027	This section was revised to incorporate the reorganization.
028	The responsibility for assuring that training is conducted is common to all Senior Management.
029	This requirement was changed to more accurately reflect the requirement of ANSI N45.2.6-1978 as endorsed by Regulatory Guide 1.58, Rev. 1, 1980 and particularly Regulatory Position C-10 for the use of "Determination of Initial Capability" in lieu of required education and experience.
030	This paragraph was deleted. The requirement is redundant with that contained in 17.2.18.3.
031	This paragraph was deleted. The Startup Testing and Systems Turnover requirements are no longer applicable.
032	Reference to the Quality Assurance Manual was deleted. This paragraph is intended to show maintenance of the QA Program description. The implementing policies and procedures are maintained and controlled in accordance with 17.2.5 and 17.2.6.
033	The Fire Protection QA Program is currently defined in a Quality Policy contained in the Nuclear Operations Management Manual. The program is based on guidance contained in Regulatory Guide 1.120, "Fire Protection Guidelines for Nuclear Power Plants" and Branch Technical Position CMEB 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants."

COMMENT	DESCRIPTION
034	The Project Manager - Nuclear position as previously defined has been deleted. This responsibility now resides with the Nuclear Operations Engineering Manager. The 60 day reference is no longer applicable and has been deleted.
035	This paragraph was deleted because it was redundant with controls placed on all design documents. The examples cited in this paragraph are not all inclusive and were not considered pertinent to the requirement. Procedural control is specified in 17.2.3.1. Design reviews are procedurally controlled as stated throughout 17.2.3.
036	Design verification other than qualification testing is completed prior to drawing release.
037	This requirement was deleted because it was a duplication of requirements defined in 17.2.4.3.b which delineates the technical requirements for procurement of items and services.
038	The Quality Assurance Manual has been replaced by Sections V & VI of the Nuclear Operations Management Manual which provides direction for procedural control of safety related procedures and instructions.
039	Approval of procedures is not only by the individual in charge of the organization engaged in the activity, but by other responsible management as applicable.
040	The originating organization will in most cases actively resolve the comments generated by procedure reviews. If, however they do not, approval of the procedure or procedure change is required by the originating organization after comments have been resolved.
041	The responsibilities for procedure review were redefined. As documented in Amendment #18 of the Waterford 3 Technical Specifications, the Plant Operations Review Committee (PORC) was reorganized and obtained a member who is knowledgeable in Quality Assurance/Control. PORC reviews all safety related plant procedures. The Quality Assurance Group reviews other selected Nuclear Operations Procedures.

COMMENT	DESCRIPTION
042	Changes to documents are reviewed and approved by the same organizations that performed the original review and approval or as designated by management. The management perrogative was added due to the changing structure of the Nuclear Operations Departments. Certain organizations may be deleted or redefined.
043	The requirement was deleted because it was not relevant to the operations phase.
044	This responsibility was shifted to the Nuclear Operations Engineering Group during the reorganization. Station Modifications are now referred to as design changes.
045	The Project Management Procedures (PMP) are being deleted and replaced by other organizational procedures as a result of the reorganization. PMPs have been replaced by NOEPs, NOSAPs, NOCPs and NPCPs as defined in table 17.2-2.
046	The evaluations of suppliers are conducted through audits and surveillances by Quality Assurance Group personnel appropriately qualified and certified in accordance with ANSI N45.2.23-1978.
047	The audit program, as defined by ANSI N45.2.23-1978 encourages the use of technical specialists when conducting audit activities. The source of the technical specialist may vary and therefore the statement was not of benefit to the QA Program requirement.
048	Documentary evidence of material or equipment acceptability must be available prior to use but not necessarily installation. This allows installation to proceed under specified conditions but precludes dependence on the item for safety purposes. Therefore, the intent of 10CFR50 Appendix B continues to be met.
049	Deletion of the requirement to review commercial item suitability prior to supplier or item selection does not affect the quality of the item. Items must be reviewed for suitability prior to use of the item.
050	The Project Management Group was deleted during the reorganization. This responsibility has been shifted to the Nuclear Operations Engineering Group or Plant Engineering.

COMMENT	DESCRIPTION
051	This review is being conducted by the Quality Assurance Group. The Plant Quality Group was deleted during the reorganization.
052	Reference 17.2.8.3.1. The inclusion of identification requirements in design documents and the subsequent verifications are only as required by specified codes, standards or specifications. LP&L utilizes procedures to define the applicability of this requirement.
053	The title of Administrative Manager - Nuclear, of the Administrative Services Department has been changed to the Nuclear Operations Administration Manager.
054	This function is performed by the Quality Assurance Group through receipt inspections and surveillances.
055	The phrase "as they are applied to quality related items" was deleted. The scope of this section of the QA Program is defined in 17.2.2 whi ; defines the scope of the entire QA Program.
056	The Non-Destructive Examination categories have been consolidated to "NDE".
057	The requirements regarding the qualifications and certification of personnel performing special processes vary with the process and the applicable standards. Therefore, this requirement was changed to state that qualifications of personnel, procedures and equipment comply with specified requirements. Further, it states that the requirements of applicable codes and standards...are specified or referenced in the procedures or instructions.
058	The requirement for a Level III to review and approve inspection procedures is not isolated to NDE only. The requirement for the review of inspection procedures is contained in Regulatory Position C.5 of Regulatory Guide 1.58, Revision 1 which LP&L has committed to per Table 17.2-1, Document 8.

COMMENT	DESCRIPTION
059	The retention of qualification records is defined by 17.2.17.3. Under the reorganization, the Nuclear Services Manager is responsible for the administration of the Records Management System. The Nuclear Quality Assurance Manager is responsible for verifying the adequacy of the Special Process Program.
060	Special process control records to be supplied to LP&L would be specified in the applicable procurement documents as stated in 17.2.4.3.e.
061	Under the Nuclear Operations reorganization, the inspection program is now under the direction of the Nuclear QA Manager. Normal routine inspections are performed by qualified maintenance personnel reporting to the Nuclear Plant Operations Manager as well as personnel reporting to the Nuclear QA Manager.
062	Under the reorganization, LP&L utilizes inspection personnel from various sources as shown in 17.2.10.3, Paragraph 1. Special inspections such as nuclear fuel receiving may require qualified individuals from outside of the Quality Assurance organization who possess the necessary expertise to adequately perform the inspection.
063	The functions performed by the Plant Quality Group have been incorporated into the Quality Assurance Group activities. The requirements for indirect inspection and process monitoring are included in the Nuclear Operations Management Manual. LP&L does not take exception to those commitments. Reference Table 17.2-1 Documents 1 and 4.
064	Training of inspection personnel is defined in 17.2.2.6. The Nuclear Operations Training Manager is responsible for providing training to Nuclear Operations inspection personnel. Qualification criteria is defined in applicable procedures.
065	References to preoperations and startup have been deleted.
066	Test procedures include provisions to ensure that adequate instrumentation is available and used. The references to the Architect - Engineer and NSSS Vendor have been deleted as they may not be all inclusive or no longer applicable.

COMMENT	DESCRIPTION
067	The personnel performing test activities are qualified in accordance with ANS 3.1 - 1978 and as shown in FSAR Chapter 13. During construction and startup, the startup engineers were certified to perform testing activities. This has been discontinued since operation.
068	The inclusion of mandatory inspection hold points was deleted. It is appropriately located in 17.2.10.6 "Inspection", which states that hold points are indicated in the appropriate documents which would include test documentation as necessary.
069	Test requirements and acceptance criteria are provided or approved by the organization responsible for the design and are based upon specified requirements contained in applicable design or technical documents. Such design or technical documents define system arrangements and are used in conjunction with operating procedures for verification.
070	Since achieving commercial operation, the Nuclear Plant Operations Manager is responsible for the development of test procedures. The Startup Group no longer exists.
071	PORC is responsible for the review of all testing procedures that affect systems/equipment classified as safety related prior to implementation.
072	The test results are evaluated to assure that test requirements have been satisfied. The test requirements as listed in 17.2.11.3 include the acceptance criteria and the specific requirements of the applicable design or other pertinent technical documents. The scope of the evaluation or method may vary from design to design.
073	These preoperational and startup requirements are no longer applicable and were therefore deleted.
074	This statement was deleted because these requirements apply as stated in 17.2.12.1 and are implemented in accordance with written procedures.
075	The plant department heads or supervisors are assigned these responsibilities through the implementing procedures for which the Nuclear Plant Operations Manager is responsible.

COMMENT	DESCRIPTION
076	Under the reorganization PORC is responsible for the review of Plant Operations procedures including the calibration procedures. The Nuclear QA Manager is responsible for the performance of audits and surveillances to verify adequate implementation of the program.
077	The program's implementing procedures list the specific identities of items under the calibration program. Paragraph 17.2.12.4.2 states that "The method and interval of calibration for each instrument and control device is defined...".
078	Due to the reorganization, this title has changed. To preclude confusion and permit authorization by levels equal to or higher than the one stated, the phrase was changed to "by responsible management."
079	The specific instructions for the proper handling of M&TE are contained in the implementing procedures. The broader statement that "M&TE is properly handled and stored to maintain accuracy" assures that not only environmental controls are in place, but many other controls as well.
080	Organizations performing calibrations for reference standards would be determined qualified through the audit program if the organization was internal or through the Supplier Audit Program if external. Therefore, this requirement is satisfied by 17.2.7 or 17.2.18.
081	The Nuclear Plant Operations Manager is responsible for the development of procedures to implement these requirements. Paragraph 17.2.12.4.2 now requires the control of M&TE to assure that equipment is calibrated prior to use and that each piece of equipment is suitably labeled or otherwise identified.
082	A calibration is performed when the accuracy of the equipment is suspect. This would include equipment which has been subject to possible damage. The calibration would determine if the equipment is adequate or whether further corrective actions would be necessary.

COMMENT	DESCRIPTION
083	Lost or misplaced M&TE is treated the same as M&TE found out of calibration. This is done in accordance with the implementing procedures which define the necessary controls.
084	The measures listed in this paragraph are included in the implementing procedures. Paragraph 17.2.12.4.2 outlines the general control measures which includes some of these requirements.
085	The requirements contained in this paragraph are included in the implementing procedures. Procedure content is defined in 17.2.5.
086	The records requirements contained in this paragraph are defined in the implementing procedures and 17.2.17.
087	Under the reorganization, the Nuclear Safety and Regulatory Affairs Manager is now responsibile for the 10CFR21 reportability functions. The Onsite Safety Review Subgroup has been replaced by the Independent Safety Engineering Group (ISEG) who performs the independent review of nonconformances on a random basis during the operations phase.
088	The Nuclear QA Manager is responsible for verifying the adequate implementation of corrective actions per 17.2.16.2.
089	The Nuclear QA Manager is now responsible for the Trend analysis of all nonconformances. The results are forwarded to the Sr. Vice President - Nuclear Operations.
090	The identification, cause, and corrective action for significant conditions adverse to quality is documented and reported to appropriate levels of management. This function is further defined in implementing procedures.
091	Under the reorganization, the Nuclear Services Manager is now responsible for the establishment and administration of the Nuclear Operations Records Management System.
092	The record retention requirements for suppliers is defined within the procurement documents. The requirements may vary from those listed in 17.2.17.5 and were therefore deleted.

COMMENT	DESCRIPTION
093	Paragraph 17.2.18.5 states that: "Planning is conducted prior to each scheduled audit." and "Such preparation is documented according to Quality Assurance Group Procedures." Additionally, 17.2.18.6 states that: "audit results are analyzed to determine the need for reaudit of deficient areas." Quality Assurance Procedures provide for the reaudit of unresolved items.
094	As stated in Table 17.2-1, Document 16, ANSI N45.12 - 1977, paragraph 4.3.2.1, the checklist is used as a guide and should not restrict the audit investigation. Quality Assurance Procedures specifically provide this instruction.
095	As shown in Table 17.2-1, LP&L is committed to ANSI N45.12 - 1977 and ANSI N45.23 - 1978 which requires auditors to be experienced, trained and familiar with requirements and standards applicable to the area or activity being audited.
096	The training of LP&L auditors is conducted in accordance with Quality Assurance Procedures as stated in 17.2.2.6. These procedures define training, recertification and audit participation requirements.
097	The Sr. Vice President - Nuclear Operations was deleted from the audit report distribution. As stated in 17.2.1.1, the Sr. Vice President - Nuclear Operations is appraised of the the status of the QA Program through status summaries submitted by the Nuclear QA Manager.
098	The annual Management Review of the LP&L QA Program is conducted at the direction of the Sr. Vice President - Nuclear Operations. As part of the review, an annual assessment is made by an independent qualified organization. The Sr. Vice President - Nuclear Operations provides the general scope for the assessment and in conjunction with the other regular reports and assignments such as the Quarterly Trend Analysis Report, he can better evaluate the effectiveness of the QA Program.
099	As stated in 17.2.1.1, status summaries of the QA Program are prepared and submitted by the Nuclear QA Manager to the Sr. Vice President - Nuclear Operations. The results of the regular audit reports are an integral part of the status summaries.

COMMENT	DESCRIPTION
100	As stated in Comment #1 of Document #1 (Table 17.2-1), 10CFR50 Appendix B, documentary evidence of material or equipment acceptability must be available prior to use but not necessarily installation. This allows installation to proceed under specified conditions..., but precludes dependence on the item for safety purposes. Therefore, the intent of 10CFR50 continues to be met.
101	This comment relates to the change from audits by offsite personnel to the annual assessments. See comment 098 for further information.
102	LP&L has optioned to commit to ASNT Recommended Practice No. SNT-TC-1A-1980 versus the 1975 version endorsed by Regulatory Guide 1.58, Revision 1 (Table 17.2-1, Document #8). The 1980 version of SNT-TC-1A provides further clarification of the requirements and is not considered a reduction in commitment. The comment relating to the qualifications of Startup testing personnel is not applicable since operations, and therefore has been deleted.
103	The comment regarding in-process tests on concrete and reinforcing steel was formally withdrawn prior to this revision. Reference LP&L letter #W3P87-1028 from K. W. Cook, Nuclear Safety and Regulatory Affairs Manager to the U.S. Nuclear Regulatory Commission, Document Control Desk on May 1, 1987.
104	The comment regarding pre-audit and post-audit conferences had been added to this revision, however, prior notice has been issued per LP&L letter # W3P86-1078 from K. W. Cook, Nuclear Support and Licensing Manager to G. W. Knighton, Office of Nuclear Reactor Regulation on April 9, 1986.
105	Reference: (Revision 1, 12/87) Para. 17.2.1.1 and Figure 17.2-1. The Safety Review Committee is shown as administratively reporting to the Nuclear Services Manager with a communicative line to the Sr. Vice President - Nuclear Operations. The administrative function in no way detracts from the reporting responsibility to the Sr. Vice President - Nuclear Operations.