Entergy	WATERFORD 3 QUALITY ASSURANCE PROGRAM MANUAL	TABLE OF CONTENTS REV. 11.0 R-TYPE: C1.31 PAGE: 1 OF 1

TITLE: **ORGANIZATION** EFFECTIVE DATE: 03/20/96

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: _____

QA MANAGER: _____ VICE PRESIDENT, OPERATIONS: _____

1.0 PURPOSE

1.1 This Chapter defines the responsibilities of organizations and individuals engaged in the implementation of quality related activities at Waterford 3. Additional organizational information is contained in the Nuclear Management Manual, reference 2.5

2.0 REFERENCES

2.1 USNRC Regulatory Guide 1.8, Revision 1-R, September 1975 (which endorses ANSI N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel.")

2.2 USNRC Regulatory Guide 1.33, Revision 2, February 1978 (which endorses ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants.")

2.3 ANSI/ANS 3.1-1978, "American National Standard For Selection and Training of Nuclear Power Plant Personnel."

2.4 NUREG-0737, "Post TMI Requirements."

2.5 Nuclear Management Manual.

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4.1 ENTERGY OPERATIONS MANAGEMENT

4.1.1 Entergy Operations management retains and exercises responsibility for the Quality Assurance program at Waterford 3. Management conducts regular meetings and makes every attempt to collectively coordinate and schedule activities within the various organizations to ensure that an effective Quality Assurance program is maintained.

4.1.2 Entergy Operations management is responsible for the development and maintenance of procedures to direct or describe quality related activities performed by or for their organization as required by the Quality Assurance program.

4.1.3 Entergy Operations Management is responsible for ensuring that implementing procedures within their department adequately implement Waterford 3 commitments and obligations. 10

4.2 VICE PRESIDENT, OPERATIONS

4.2.1 The Vice President, Operations is responsible for assuring the development and approval of Waterford 3 quality policies. Reporting to him are the:

a. General Manager, Plant Operations;

b. Director, Plant Modification and Construction;

c. Director, Site Support;

d. Director, Nuclear Safety;

e. Training Manager; and

f. Safety Review Committee.

4.2.2 The Vice President, Operations is responsible for acting as the chairman of the Safety Review Committee (SRC) and appointing the vice chairman and other members of the SRC. He also appoints SRC alternates and subcommittee chairmen and members.

4.2.3 The Vice President, Operations reviews trend reports, status summaries, and the results of management assessments to evaluate the effectiveness of the Waterford 3 Quality Assurance program. In addition, the Vice President, Operations or his designee, endorses the Waterford 3 Management Manual, and revisions thereto, which contain policies and directives applicable to Waterford 3. 9

4.3 GENERAL MANAGER, PLANT OPERATIONS

4.3.1 The Waterford 3 plant operations organization (hereinafter referred to as the Plant Operations Staff) is headed by the General Manager, Plant Operations. The primary quality related responsibilities of the General Manager, Plant Operations include:

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

b. Assuring the development and proper implementation of quality related procedures and instructions for activities such as plant operations, maintenance, repair, test, radiation protection, fire protection, and safety to ensure plant and personnel safety;

c. Addressing matters brought to his/her attention by the Plant Operations Review Committee (PORC), which is established to ensure on-site review and evaluation of plant operations, maintenance, and test programs. The PORC reports to the General Manager, Plant Operations and advises him/her on matters related to nuclear safety, including referral of topics requiring review and potential action by the SRC. PORC membership and responsibilities are in accordance with this manual. The PORC is also responsible for the review of design changes and site nonconformance documents which have been dispositioned as "use-as-is" or "repair.";

d. Acting as Chairperson of the Condition Review Board (CRB);

e. Analyzing conditions for trends regarding equipment failure, and publishing a quarterly trend report; Z

f. Approving design changes prior to implementation;

g. Developing and maintaining quality related operations and maintenance procedures;

h. Implementing Technical Specification controls and surveillances;

i. Identifying and performing required corrective and preventive maintenance;

j. Implementing a measuring and test equipment calibration program;

k. Providing engineering/technical support for primary/ secondary chemistry, environmental monitoring, radiation protection, water treatment, and process controls;

l. Initiating, prioritizing, and performing acceptance testing of plant modification activities;

m. Reactor engineering and special nuclear material control and accountability controls;

n. Coordinating the Fire Protection program;

o. Housekeeping inside the Radiation Controlled Areas;

p. On-site handling, storage, packaging, and shipping of radioactive wastes;

q. Providing technical expertise to assist in the on-site handling, storage, packaging, cleaning, and release for shipping to a transit carrier of radioactive material;

r. Developing and controlling the ALARA program;

s. Developing and controlling the Radiation Protection program, including Radiological Effluent Monitoring program;

Z

t. Managing or implementing the In-service Testing, Local Leak Rate Testing, and the Hydrostatic Testing programs;

u. Acting as a liaison with regulatory agencies on technical issues involving plant chemistry;

v. Reviewing design changes and plant modifications from a radiological standpoint;

w. Assembling Work Authorization Packages including support documentation such as procedures, drawings, etc.;

x. Performing a quality review of all maintenance initiated work authorizations not containing a hold point, not involving special processes, or not classified as safety related, to ensure the inclusion of quality requirements. OR

y. Tracking controlled maintenance activities related to installed plant hardware to closure;

z. Implementing the Security Plan and Safeguards Contingency Plan;

aa. Controlling plant area access;

bb. Implementing the Fitness For Duty program, including;

1. Reviewing and interpreting presumptive positive test results obtained through the Fitness For Duty program.

cc. Directing the management of the Hazardous Waste/Hazardous Material programs; Z

dd. Acting as a liaison with regulatory agencies on technical issues involving the environment;

ee. Developing and implementing Radiological and Non-Radiological Environmental Monitoring programs; and

ff. Implementing the Entergy Operations, Inc. welding program. Z

4.4 DIRECTOR, PLANT MODIFICATION AND CONSTRUCTION

4.4.1 The primary quality related responsibilities of the Director, Plant Modification and Construction include:

a. Coordinating plant design changes;

b. Managing the plant modification process through the phases of design, implementation, testing, and acceptance;

c. Coordinating the development and review of departmental procedures;

d. Reviewing and processing assigned work authorizations and managing services for plant repair, modification, and construction which is under his jurisdiction;

e. Performing a quality review of all construction initiated work authorizations not containing a hold point, not involving special processes, or not classified as safety related, to ensure the inclusion of quality requirements. CR

f. Ensuring proper completion of modification and construction work prior to acceptance; and

g. Coordinating construction tasks involved with outages and retrofitting.

4.5 DIRECTOR, SITE SUPPORT

4.5.1 The primary quality related responsibilities of the Director, Site Support include:

a. Managing the preparation and approval of the Waterford 3 Emergency Plan and implementing procedures;

b. Coordinating the preparation of emergency drill scenarios and performance of practice drills;

c. Providing support for records management, including execution of document control and records storage programs; Z

4.6 DIRECTOR, NUCLEAR SAFETY

4.6.1 The primary quality related responsibilities of the Director, Nuclear Safety include:

a. Coordinating and reviewing responses to Nuclear Regulatory Commission matters, as assigned;

b. Managing the preparation of updates/revisions to the Final Safety Analysis Report and the Technical Specifications;

c. Managing the Waterford 3 Commitments Management System;

d. Managing the preparation of responses to IE bulletins, NRC orders, inspection reports, generic letters, information notices, and Notices of Violation;

e. Reviewing corrective action documents for determination of reportability;

f. Interfacing with on-site and outside organizations such as the NRC, INPO, Quality Assurance, and equipment vendors to ensure quality is maintained;

g. Reviewing plant system problems and performance concerns;

h. Reviewing operating abnormalities and Licensee Event Reports;

i. Examining plant operating characteristics, NRC issuances, industry advisories, Licensee Event Reports, and other sources of plant design and operating experience information, involving units of similar design, which may indicate areas for improving plant safety as part of the Independent Technical Review function. The Independent Technical Review functions include responsibility for:

1. Making recommendations for improving plant safety including procedure revisions, equipment modifications, maintenance activities, operations activities, or other means of improving plant safety;

2. Maintaining surveillance of plant activities to provide independent verification that these activities are performed correctly and that human errors are reduced as much as practical;

j. Maintaining SRC charters;

k. Performing independent reviews, safety examinations, and other review activities in support of the SRC and Technical Specification requirements;

l. Overseeing the activities of the Quality Team (Q-Team); and

m. Coordinating the development, preparation, and maintenance of Waterford 3 policies and directives.

4.6.2 The Director, Nuclear Safety is also responsible for the direction and administration of the Quality Assurance Manager and staff, who have the following responsibilities and authorities:

a. The Quality Assurance Manager has the authority and responsibility for developing, coordinating, and verifying implementation of the Waterford 3 Quality Assurance program. The Quality Assurance Manager maintains an overview of Waterford 3 quality related activities through reviews, audits, surveillances, and inspections. Quality Assurance personnel have sufficient authority and organizational freedom to effectively:

1. Identify quality problems;

2. Initiate, recommend or provide solutions through designated channels; and

3. Verify implementation of solutions.

b. This organizational freedom includes sufficient independence from cost and schedule when opposed to safety considerations;

c. The Quality Assurance Manager has the authority to stop unsatisfactory work and/or control further processing, delivery, or installation of nonconforming material through designated channels;

d. The primary quality related responsibilities of the Quality Assurance Manager include:

1. Planning, organizing, and administering the Quality Assurance program;

2. Developing, reviewing, and concurring with the content of the Waterford 3 Quality Assurance Program Manual and changes thereto. 10 Z & 8

3. Developing and maintaining Quality Assurance Procedures (QAPs);

4. Assisting in establishing that portion of the Training program that addresses quality assurance;

5. Advising, reviewing, and concurring on the scope and content of quality assurance training and indoctrination programs for personnel performing quality related activities;

6. Providing requested inspection training to personnel performing quality related activities;

7. Certifying Lead Auditors and Inspectors;

8. Assuring effective implementation of the Quality Assurance program through a comprehensive system of reviews, assessments, and the performance or monitoring of nondestructive examinations and other special processes;

9. Ensuring that quality reviews are conducted for quality related implementing procedures design changes, including drawings and specifications, to ensure the inclusion of quality requirements; Z

10. Reviewing all safety related work authorizations(WAs), WAs containing hold points, or WAs involving special processes, to ensure the inclusion of quality requirements and ensuring that quality reviews are conducted for all other initiated work authorizations; 9

11. Reviewing nonconformance work authorization packages;

12. Assuring that the corrective action processes under his/her jurisdiction are implemented according to approved procedures;

13. Conducting reviews, assessments and monitoring of the various corrective action processes to ensure that the required program aspects are adequately addressed;

14. Analyzing conditions for human performance trends and publishing quarterly trend reports;

15. Administering a root cause investigation and trend analysis program for identified adverse conditions; Z

16. Conducting an ongoing assessment of the radiation protection and radwaste programs;

17. Establishing and maintaining documentation of Quality Assurance activities; and

18. Providing status information regarding the Quality Assurance program to the Director, Nuclear Safety and the Vice President, Operations;

e. The qualifications of the Quality Assurance Manager include as a minimum:

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

2. 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;

3. Experience in development and implementation of quality assurance programs, plans, and procedures;

4. Expertise in interpretation and application of Appendix B to 10CFR50 and related codes, standards, and regulatory guides;

5. Knowledge of inspection and nondestructive testing requirements;

6. Ability to plan, organize, and administer a Quality Assurance program; and

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

4.7 TRAINING MANAGER

4.7.1 The primary quality related responsibilities of the Training Manager include:

a. Providing training for Waterford 3 personnel, including training required by regulations, General Employee Training, and training for the Engineering Support Personnel;

b. Maintaining training records; and

c. Providing an instructor certification program.

4.8 SAFETY REVIEW COMMITTEE

4.8.1 The Safety Review Committee (SRC) is responsible for providing Entergy Operations 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. The SRC is responsible for providing independent review and audit of Waterford 3 operations; reviewing changes or modifications which involve an unreviewed safety question; reviewing safety evaluations of changes made to the plant and plant procedures under the provisions of 10CFR50.59; maintaining oversight and assessing the effectiveness of the corrective action program; and performing special evaluations, reviews, and audits as may be requested by the Vice President, Operations.

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

a. Nuclear power plant operations
b. Nuclear engineering
c. Chemistry and radiochemistry
d. Metallurgy
e. Instrumentation and control
f. Radiological safety
g. Mechanical and electrical engineering and
h. Quality assurance practices.

4.8.3 The SRC shall be composed of at least five members, including the Chairman. Members of the SRC may be from within the Entergy Operations Inc. (EOI) organization or from organizations external to EOI. The qualifications of members selected for the SRC shall be in accordance with Section 4.7 of ANSI/ANS 3.1-1978.

4.8.4 All alternate members shall be appointed in writing by the SRC Chairman to serve on a temporary basis; however, no more than two alternates shall participate as voting members in SRC activities at any one time.

4.8.5 Consultants shall be utilized as determined by the SRC Chairman to provide expert advise to the SRC.

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

4.8.7 The quorum of the SRC necessary for the performance of the review and audit function shall consist of a minimum of five members or of not less than a majority of the composition of members in paragraph 4.8.3 above, whichever is greater. No more than a minority of the members shall have line responsibility for operation of the plant.

4.8.8 The SRC shall be responsible for the review of:

a. The safety evaluations for (1) changes to procedures, equipment, or systems, and (2) tests or experiments completed under the provision of 10 CFR 50.59, to verify that such actions did not constitute an unreviewed safety question;

b. Proposed changes to procedures, equipment or systems which involve an unreviewed safety question as defined in 10 CFR 50.59;

c. Proposed tests or experiments which involve an unreviewed safety question as defined in 10 CFR 50.59;

d. Proposed changes to Technical Specifications or the Operating License;

e. Violations of codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance;

f. Significant operating abnormalities or deviations from normal and expected performance of unit equipment that affect nuclear safety;

g. All REPORTABLE EVENTS;

h. All recognized indications of an unanticipated deficiency in some aspect of design or operation of structures, systems, or components that could affect nuclear safety; and

i. Reports and meeting minutes of the PORC.

4.8.9 The SRC shall report to and advise the Vice President, Operations on areas of responsibility.

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

a. Minutes of each SRC meeting shall be prepared, approved, and forwarded to the Vice President, Operations within 14 days following each meeting;

b. Reports of reviews encompassed in paragraph 4.8.8 above shall be prepared, approved, and forwarded to the Vice President, Operations within 14 days following completion of the review; and

c. Audit reports encompassed by paragraph 5.2 of Chapter 18 shall be forwarded to the Vice President, Operations and to the management positions responsible for the areas audited within 30 days after completion of the audit by the auditing organization;

4.9 Plant Operations Review Committee (PORC)

4.9.1 The PORC shall function to advise the General Manager, Plant Operations on all matters to nuclear safety.

4.9.2 The PORC shall be composed of the following members with either the Manager Technical Services or the Manager Operations and Maintenance as the Chairman:

Manager Technical Services
Manager Operations and Maintenance
Management Knowledgeable in Engineering*
Maintenance Superintendent
Operations Superintendent
Radiation Protection Superintendent
Management Knowledgeable in Quality Assurance/Control

*Management knowledgeable in engineering is one of the following: STA Supervisor, Systems Engineering Electric/HVAC Supervisor, Systems Engineering Mechanical Supervisor or Reactor Engineering and Performance Supervisor.

4.9.3 In the absence of the PORC Chairman, the General Manager, Plant Operations will appoint a temporary Chairman. All other alternate members shall be appointed in writing by the PORC Chairman to serve on a temporary basis; however, no more than two alternates shall participate as voting members in PORC activities at any one time.

4.9.4 The PORC shall meet at least once per calendar month and as convened by the PORC Chairman or his designated alternate.

4.9.5 The quorum of the PORC necessary for the performance of the PORC responsibility and authority provisions shall consist of the Chairman or his designated alternate and three members, including alternates.

4.9.6 The PORC shall be responsible for:

a. Review of (1) all plant administrative procedures required by Technical Specification 6.8 and changes thereto, (2) all programs required by Technical Specification 6.8 and changes thereto, (3) changes to the Waterford 3 Emergency Operating Procedures required to implement the requirements of NUREG 0737 and NUREG 0737, Supplement 1, as stated in Generic Letter 82-33, and (4) any other proposed procedures or changes thereto as determined by the General Manager, Plant Operations;

b. Review of all proposed tests and experiments that affect nuclear safety;

c. Review of all proposed changes to Appendix "A" Technical Specifications;

d. Review of all proposed changes or modifications to unit systems or equipment that affect nuclear safety;

e. Review of investigations of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence to the General Manager, Plant Operations and to the Safety Review Committee;

f. Review of all REPORTABLE EVENTS;

g. Review of unit operations to detect potential hazards to nuclear safety;

h. Performance of special reviews, investigations, or analyses and reports thereon as requested by the General Manager, Plant Operations or the Safety Review Committee;

i. Review of the Security Plan and submittal of recommended changes to the Safety Review Committee;

j. Review of the Emergency Plan and submittal of recommended changes to the Safety Review Committee;

k. Review and documentation of judgment concerning prolonged operation in bypass, channel trip, and/or repair of defective protection channels of process variables placed in bypass since the last PORC meeting;

l. Review of proposed modifications to the CPC addressable constants based on information obtained through the Plant Computer-CPC data link;

m. Review of any accidental, unplanned or uncontrolled radioactive release including reports covering evaluation, recommendations and disposition of the corrective action to prevent recurrence and the forwarding of these reports to the Vice President, Operations and to the Safety Review Committee;

n. Review of changes to the PROCESS CONTROL PROGRAM and the OFFSITE DOSE CALCULATION MANUAL, and major changes to radwaste treatment systems;

o. Review of the Fire Protection Program and submittal of recommended changes to the Safety Review Committee; and

p. Review of proposed procedures and changes to procedures which involve an unreviewed safety question as defined in 10CFR50.59;

4.9.7 The PORC shall:

a. Recommend in writing to the General Manager, Plant Operations, prior to implementation except for temporary changes to procedures as provided in Technical Specification 6.8.3, approval or disapproval of items considered under paragraph 4.9.6 a. through d. and l;

b. Render determinations in writing, prior to implementation except for temporary changes to procedures as provided in Specification 6.8.3, with regard to whether or not each item considered under paragraph 4.9.6 a. through e. constitutes an unreviewed safety question; and

c. Provide written notification within 24 hours to the Vice President, Operations and the Safety Review Committee of disagreements between the PORC and the General Manager, Plant Operations; however, the General Manager, Plant Operations shall have responsibility for resolution of such disagreements pursuant to Technical Specification 6.1.1.

4.9.8 The PORC shall maintain written minutes of each PORC meeting that, at a minimum, document the results of all PORC activities performed under the responsibility and authority provisions of these technical specifications. Copies shall be provided to the Vice President, Operations and the Safety Review Committee.

4.10 DIRECTOR, DESIGN ENGINEERING

4.10.1 The primary quality related responsibilities of the Director, Design Engineering, (who reports to the Vice President, Engineering, domiciled in Jackson and not part of the Waterford 3 site organization) include:

a. Being the design authority for changes to the design basis except for nuclear fuel and core design;

b. Performing design evaluations to address plant problems;

c. Maintaining the design configuration documentation in an as-built condition;

d. Assessing the impact of changes to plant design and operation on the design basis accident analysis;

e. Supporting plant activities for environmental qualification (EQ);

f. Reviewing new or changed technical and quality requirements for spare and replacement part requisitions classified as EQ;

g. Maintaining the Waterford 3 EQ List;

h. Assisting in the establishment of quality assurance and technical requirements in selected quality related procurement documents;

i. Evaluating part substitutions;

j. Dedicating commercial grade items for use in safety related applications;

k. Supporting plant activities for ASME Section XI;

l. Developing and maintaining the following Waterford 3 programs:

1. ASME Ten Year In-service Inspection Program;

2. Steam Generator Eddy Current Program;

3. Erosion/Corrosion Program;

4. Microbiologically Induced Corrosion (MIC) Program;

5. Lifting Rig Assembly Inspection Program;

6. 10CFR50.49 Environmental Qualification of electrical equipment important to safety for nuclear power plants;

m. Maintaining the Waterford 3 Q-List and Q-Related List to define safety and quality classifications;

n. Maintaining the site tagging and labeling standard; and

o. Piping analysis.

4.11 VICE PRESIDENT, ENGINEERING

4.11.1 The Vice President, Engineering reports directly to the Executive Vice President & Chief Operating Officer, and is responsible for providing the direction and administration necessary to the Waterford 3 Design Engineering department and services including:

a. Reactor physics analysis;

b. Plant transient analysis;

c. Thermal hydraulic analysis;

d. Nondestructive analysis;

e. Metallurgical evaluations;

f. Fuel fabrication and related services;

g. Reactor engineering and special nuclear material control and accountability; and

h. Entergy Operations, Inc. welding program. Z

4.12 VICE PRESIDENT, OPERATIONS SUPPORT

4.12.1 The Vice President, Operations Support reports directly to the Executive Vice President & Chief Operating Officer, and is responsible for:

a. Administering corporate support functions in the areas of radiological protection, radioactive waste management, chemistry, environmental services, operations, maintenance, outage management, security, emergency planning, technology transfer, and central licensing; providing oversight of site Health Physics and Chemistry activities; and managing the Plant Support and Assessment, Information Systems, Supplier QA, and Materials, Purchasing and Contracts groups. It is the responsibility of the Vice President, Operations Support to assure that these functions performed for Waterford 3 are performed in accordance with the requirements of the Waterford 3 Quality Assurance program; and Z

b. Providing the direction and administration necessary relative to the following listed primary quality related responsibilities as they relate to the Waterford 3 Quality Assurance Program:

1. Evaluating quality assurance programs and activities of Waterford 3 suppliers and contractors of quality related items, spare parts, and services through reviews, surveillances, and audits;
2. Conducting pre-award evaluations for quality requirements of vendors, suppliers, and contractors where applicable;
3. Maintaining a qualified suppliers list (QSL) for use in procuring safety related items, spare parts, and services;
4. Performing design review and fuel fabrication audits as necessary to ensure that nuclear fuel procured for use by Entergy Operations is designed and fabricated in accordance with applicable codes, standards, and regulations;
5. Selecting site specific vendors and contractors based upon technical, quality and commercial evaluations;
6. Purchasing and receipt of equipment, parts, materials, and supplies in support of Waterford 3 operations and station modifications; Z
7. Administering a receipt inspection program to assure acceptability of quality related materials, parts, and components;

8. Coordinating the processing and review of procurement documents for equipment, parts, materials, and services in support of plant operations and station modifications, including maintenance and design changes;

9. Establishing quality assurance and technical requirements in quality related procurement documents; Z

10. Maintaining storage conditions necessary to sustain material quality; and

11. Processing and securing material traceability data to support historical reference.

4.13 ENTERGY OPERATIONS PERSONNEL

Entergy Operations personnel are responsible for adherence to the requirements delineated in this QA Program Manual and its implementing procedures. Entergy Operations personnel are also responsible for identifying and reporting conditions adverse to quality and for identifying program or procedural enhancements.

4.14 SUPPLIERS/CONTRACTORS

Suppliers/contractors of quality related material, equipment, spare parts, and/or services shall be required, as appropriate, by procurement documents to have a quality program. In such cases, a line of communication shall exist between the supplier/contractor and the Waterford 3 or Headquarters Quality Assurance organization. The overall responsibility for quality at Waterford 3 remains with Entergy Operations at all times.

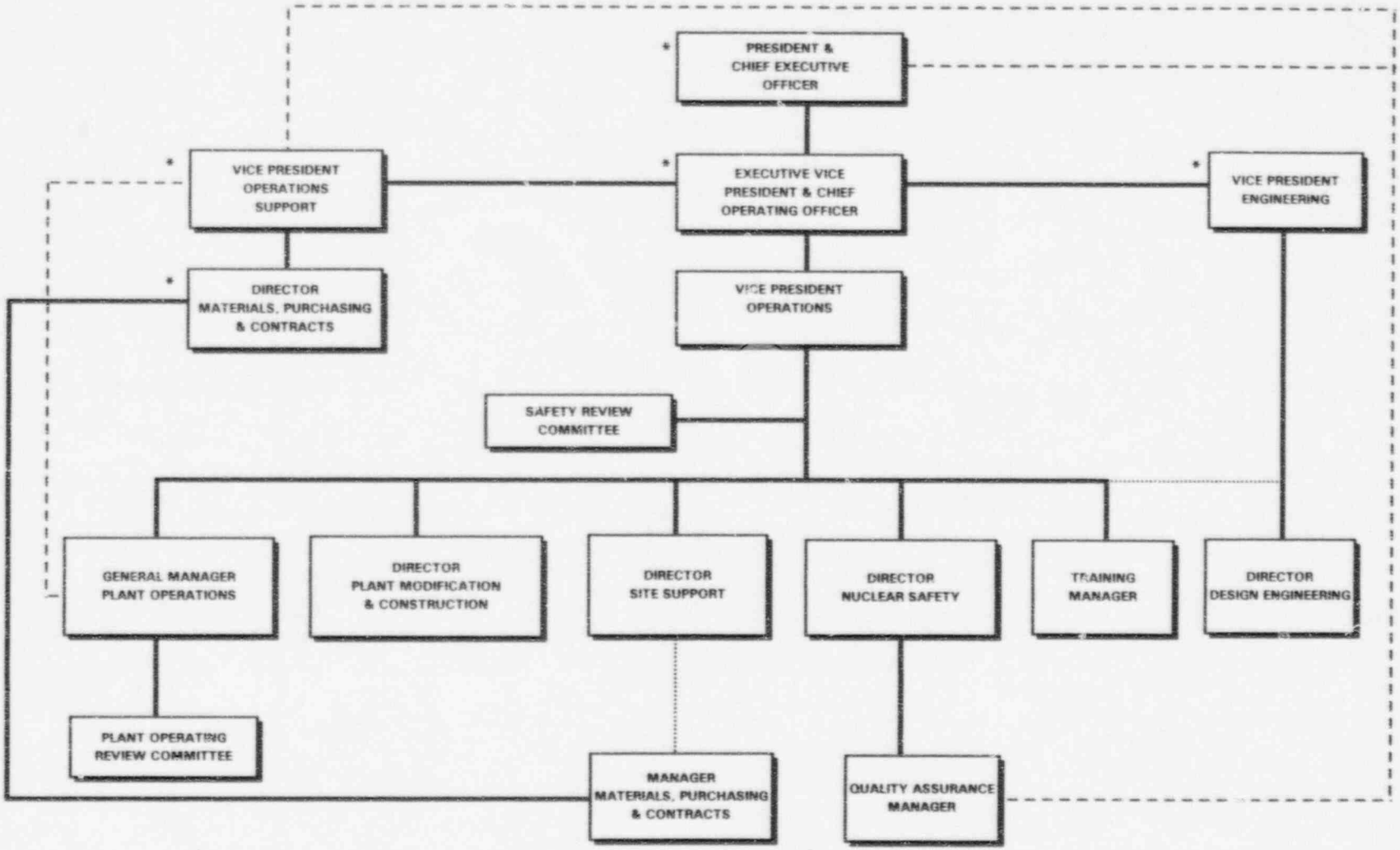
5.0 DETAILS

5.1 ORGANIZATIONS PERFORMING QUALITY ASSURANCE FUNCTIONS

Attachment I shows the lines of authority for the major Entergy Operations organizations that perform Quality Assurance functions at Waterford 3.

6.0 ATTACHMENTS

Attachment I - Waterford 3 Organization Chart.



* This position is domiciled in Jackson and is not part of the Waterford 3 on-site organization

Communicative Line

Matrix Responsibility

NOTE: All departments have communicative lines to the Quality Assurance Manager

TITLE: **QUALITY ASSURANCE PROGRAM** EFFECTIVE DATE: 03/20/96

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: R. F. Burski

QA MANAGER: Gregory J. Davis VICE PRESIDENT, OPERATIONS: _____

1.0 PURPOSE

1.1 It is the objective of Entergy Operations to operate and maintain the Waterford 3 nuclear plant in the highest degree of functional integrity and reliability and to avoid undue risk to the health and safety of employees and the general public. It is the policy of Entergy Operations that the programs for design, procurement, fabrication, installation, inspection, testing, operation, maintenance, repair, refueling, and modification of Waterford 3 comply with the requirements of 10CFR50, Appendix B and other related regulatory guidance.

1.2 This section of the QA Program Manual describes the overall Waterford 3 Quality Assurance Program which assures that quality related activities are performed in a controlled manner and are documented to provide objective evidence of compliance with NRC regulations and guidance. This program takes into account the need for trained personnel, approved procedures, special controls, processes, equipment, and skills necessary to attain the required quality, and the need for verification of quality by inspection, testing, and audit.

1.3 The Quality Assurance Program is implemented through the use of approved policies, directives, procedures, and instructions which provide written guidance for the control of quality related activities. These documents incorporate the requirements of the regulatory guides and the NRC endorsed ANSI Standards to which Waterford 3 has specifically committed.

2.0 REFERENCES

2.1 USNRC Regulatory Guide 1.33, Rev. 2, February 1978 (which endorses ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants.")

2.2 Technical Specifications, Waterford Steam Electric Station, NUREG-1117.

2.3 10CFR50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants."

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4.1 VICE PRESIDENT, OPERATIONS

The Vice President, Operations is responsible for providing overall approval and direction for the Waterford 3 Quality Assurance Program.

4.1.1 Safety Review Committee (SRC)

The Safety Review Committee is responsible for functioning as the off-site independent review committee. The SRC is responsible for: providing independent review and audit of Waterford 3 operations, reviewing changes or modifications which involve an unreviewed safety question, and reviewing safety evaluations of changes made to the plant and plant procedures under the provisions of 10CFR50.59. Additional responsibilities are listed in Chapter 1 and the Waterford 3 Technical Specifications.

4.2 GENERAL MANAGER, PLANT OPERATIONS

The General Manager, Plant Operations is responsible for ensuring the development of procedures or instructions for the implementation of the following functional units: Plant Operations Review Committee (PORC); Operations and Maintenance; Technical Services; Planning and Scheduling; and Security and General Support. The primary quality related responsibilities of the General Manager, Plant Operations are listed in Chapter 1.

4.2.1 Plant Operations Review Committee (PORC)

The PORC is responsible for functioning as the on-site independent review committee, and is responsible for reviewing plant operations items and procedures which are submitted to it; and for recommending approval by the General Manager, Plant Operations in accordance with applicable procedures. Additional responsibilities are listed in Chapter 1 and the Waterford 3 Technical Specifications.

4.3 DIRECTOR, PLANT MODIFICATION AND CONSTRUCTION

The Director, Plant Modification and Construction is responsible for ensuring the development and maintenance of procedures or instructions for the implementation of the following programs and organizational units: Modification Control, Construction, and Project Management. The primary quality related responsibilities of the Director, Plant Modification and Construction are listed in Chapter 1.

4.4 DIRECTOR, SITE SUPPORT

The Director, Site Support is responsible for ensuring the development and maintenance of procedures or instructions for the implementation of the following programs and organizational units: Site Business Services; Emergency Planning and Administration; and Management Programs and Excellence. The primary quality related responsibilities of the Director, Site Support are listed in Chapter 1.

4.5 DIRECTOR, NUCLEAR SAFETY

The Director, Nuclear Safety is responsible for ensuring the development and maintenance of procedures or instructions for the implementation of the following programs and organizational units: Licensing; Safety Review; Policy and Directives; Quality Assurance; and Operational Experience Engineering. The primary quality related responsibilities of the Director, Nuclear Safety are listed in Chapter 1.

4.6 TRAINING MANAGER

The Training Manager is responsible for ensuring the development and maintenance of procedures or instructions for the implementation of the following programs and organizational units: Operations Training; Simulator Training; Maintenance Training; Technical Training; and Engineering Training and Accreditation. The primary quality related responsibilities of the Training Manager are listed in Chapter 1.

4.7 DIRECTOR, DESIGN ENGINEERING

The Director, Design Engineering is responsible for ensuring the development and maintenance of procedures or instructions for the implementation of the following programs and organizational units: Safety and Engineering Analysis; Procurement/Programs Engineering; and Design Engineering. The primary quality related responsibilities of the Director, Design Engineering are listed in Chapter 1.

4.8 VICE PRESIDENT, ENGINEERING

The Vice President, Engineering reports directly to the Executive Vice President & Chief Operating Officer, and is responsible for providing engineering services in support of the Waterford 3 Quality Assurance Program. The primary quality related responsibilities of the Vice President, Engineering are listed in Chapter 1.

4.9 VICE PRESIDENT, OPERATIONS SUPPORT

The Vice President, Operations Support reports directly to the Executive Vice President & Chief Operating Officer, and is responsible for the administration of corporate support functions in the areas of radiological protection, radioactive waste management, chemistry, environmental services, operations, maintenance, outage management, security, emergency planning, technology transfer, and central licensing; oversight of site Health Physics and Chemistry activities; and management of the Plant Support and Assessment, Information Systems, Supplier QA and Materials, Purchasing and Contracts groups. It is the responsibility of the Vice President, Operations Support to assure that these functions performed for Waterford 3 are performed in accordance with the requirements of the Waterford 3 Quality Assurance program. 21

5.0 DETAILS

5.1 DOCUMENT HIERARCHY

5.1.1 Attachment I depicts the hierarchy of documents comprising the Waterford 3 Quality Assurance program. This attachment identifies various program documentation that controls quality related activities at Waterford 3. Quality Assurance program implementing documents define the responsibilities of individuals and organizations participating in quality related activities.

5.1.2 The highest level of the Waterford 3 Quality Assurance program includes:

a. Federal and state regulations;

b. Industry codes and standards;

c. Licensing agreements and specifications; and

d. The Final Safety Analysis Report.

5.1.3 The next level of the document hierarchy includes:

a. Nuclear Management Manual;

b. Waterford 3 Management Manual; and

c. Waterford 3 Quality Assurance Program Manual (QAPM).

5.1.4 The succeeding level of documentation contains departmental level procedures and instructions.

5.1.5 This manual, as well as the Quality Assurance Program Manual (Special Scope), provides the media for informing responsible organizations and individuals that implementation of the Quality Assurance program is mandatory and that the Quality Assurance program shall be enforced.

5.2 QUALITY ASSURANCE PROGRAM MANUAL

5.2.1 This Quality Assurance Program Manual defines the responsibilities and activities necessary to implement the quality requirements and commitments contained in the highest level documents including 10CFR50 Appendix B, the regulatory guides, and the ANSI Standards as listed in Appendix A of this manual.

5.2.2 Chapters 1 and 2 of this manual address the Waterford 3 quality related commitments in order to summarize the entire scope of the Quality Assurance program.

5.2.3 Chapters 3 through 18 of this manual have been developed to promulgate the safety related commitments only.

5.3 QUALITY ASSURANCE PROGRAM MANUAL (SPECIAL SCOPE)

5.3.1 The Quality Assurance Program Manual (Special Scope) defines the quality requirements for quality related items and activities not meeting the definition of safety related. The Quality Assurance Program Manual (Special Scope) has been developed to define the 10CFR50 Appendix B criteria applicable to specific activities. The Quality Assurance Program Manual (Special Scope) may address each criteria and its implementation; or reference the applicable chapter of this Quality Assurance Program Manual, stating that the safety related controls apply.

5.3.2 The chapters provide direction for the following special scope programs:

a. Fire Protection Quality Assurance;

b. Radiological Effluent and Environmental Monitoring;

c. Emergency Preparedness;

d. Security;

e. Radioactive Waste Management Quality Program;

f. Special Nuclear Material Control and Accountability;

g. Computer Software;

h. ALARA Program;

i. Radiation Protection;

j. ATWS; and

k. Station Blackout.

5.4 PROCEDURES AND INSTRUCTIONS

5.4.1 The individual Entergy Operations organizations assigned responsibilities by the Nuclear Management Manual, Waterford 3 Management Manual, and the QAPM shall be responsible for the development, maintenance, and implementation of procedures and instructions to detail the respective elements of program performance.

5.4.2 The procedure types listed in 5.4.3 have been developed at Waterford 3 to address required aspects of plant management and operations. These procedures will:

a. Implement the policy and direction of the Nuclear Management Manual, Waterford 3 Management Manual, and the QAPM to provide control over quality related operations and activities to a degree consistent with their importance to safety;

b. Provide a clear understanding of the operating philosophy at Waterford 3; and

c. Delineate the responsibilities and authorities of the Waterford 3 staff.

5.4.3 The Waterford 3 procedures and instructions contained in this level are the:

a. Plant Operating Manual;

b. Quality Assurance procedures;

c. Site Support procedures;

d. Design Engineering procedures;

e. Design Engineering Administrative Manual (DEAM);

f. Plant Modification and Construction procedures; and

g. Nuclear Safety procedures.

h. Nuclear Training procedures.

5.5 IDENTIFICATION OF SAFETY RELATED STRUCTURES, SYSTEMS, AND COMPONENTS

5.5.1 The Quality Assurance Program applies to all activities associated with quality related structures, systems, and components to an extent commensurate with their importance to safety. FSAR Table 3.2-1, Appendix A to this manual, and the Waterford 3 Q-List provide safety related classifications of plant structures, systems, and components and identifies those items subject to 10CFR50 Appendix B requirements.

5.5.2 Procedures provide further guidance for the identification of safety and quality related structures, systems, components and related activities to assure that the appropriate level of Quality Assurance program requirements are applied.

5.5.3 Procedures for the preparation and control of procurement documents provide guidance for spare and replacement part classification determination. These procedures invoke applicable codes, standards, regulations, FSAR requirements, and the Q-List classifications for determining the classification of spare or replacement parts or materials.

5.6 RESOLUTION OF DISPUTES

5.6.1 Disputes involving quality, arising from a difference of opinion between Entergy Operations departments, are normally resolved via direct interaction between the managers involved. If a satisfactory resolution cannot be reached, the disputes are resolved through higher levels of management. The Quality Assurance Manager should be consulted for disputes involving the Waterford 3 Quality Assurance program interpretation and implementation.

5.6.2 Disputes involving quality, arising from a difference of opinion between Entergy entities, contractors, or suppliers, are normally resolved through the appropriate manager. If a satisfactory resolution cannot be reached, the disputes should be elevated to the Vice President, Operations, if necessary. The Quality Assurance Manager should be consulted for disputes involving other Entergy entities. The Vice President, Operations Support and/or the Quality Assurance Manager should be consulted for disputes concerning contractors or suppliers.

5.6.3 Written notification shall be provided to the Vice President, Operations, and the Safety Review Committee regarding disputes or disagreements arising from a difference of opinion between the Plant Operations Review Committee and the General Manager, Plant Operations. The General Manger, Plant Operations has responsibility for resolution of such disputes in accordance with the technical specifications.

5.7 INDOCTRINATION, TRAINING, AND QUALIFICATION PROGRAMS

5.7.1 Indoctrination, training, and qualification programs shall be established for Entergy Operations personnel performing quality related activities. These programs shall be designed to ensure that personnel involved are knowledgeable in quality procedures and requirements, and have the necessary proficiency to perform the tasks. The scope, objective, and method of implementing the indoctrination and training program shall be documented in approved procedures.

5.7.2 Entergy Operations management is responsible for assuring that personnel are properly trained to perform activities in a safe and effective manner. The Training Manager is responsible for providing professional, technical, and educational programs to support the indoctrination and training of Waterford 3 employees, contractors, and visitors to assure their safety and proficiency during the performance of their activities at Waterford 3. The Quality Assurance Manager reviews the content of quality related indoctrination and training programs to assure adequacy.

5.7.3 Indoctrination, training, and qualification programs require:

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 qualification of personnel performing or verifying activities are maintained by retraining, re-examining, and/or recertifying on a periodic basis, as applicable;

d. Proficiency testing is utilized to determine qualifications when education, experience, and training cannot be verified by other means; and

e. Training and qualification documentation is maintained which describes the objectives, content, attendance, tests, acceptance criteria, and the functions personnel are qualified to perform.

5.7.4 The training program for Waterford 3 personnel is further described in Chapter 13 of the FSAR and in implementing procedures.

5.7.5 Waterford 3 Quality Assurance or the Entergy Operations Supplier QA organization conducts audits of other organizational units, such as suppliers and contractors engaged in quality related activities at or for Waterford 3 to verify that personnel are adequately indoctrinated, trained, and qualified.

5.8 CONTROLLED CONDITIONS FOR PERFORMING ACTIVITIES

Quality related activities shall be accomplished under controlled conditions by personnel with the necessary skills to attain the required quality. Activities shall be performed using appropriate equipment, under suitable environmental conditions and with the assurance that prerequisites for the given activity have been satisfied.

5.9 MANAGEMENT REVIEW OF THE QUALITY ASSURANCE PROGRAM

5.9.1 The Vice President, Operations ensures that a management assessment of the Quality Assurance program is conducted periodically by a qualified independent organization. 8

5.9.2 The information from these management assessments, the trend report, and summaries of the Quality Assurance program status are used by the Vice President, Operations to evaluate the effectiveness of the Quality Assurance program and to take action, as necessary, to assure that the program complies with applicable regulatory requirements.

5.10 MAINTENANCE OF THE QUALITY ASSURANCE PROGRAM

5.10.1 Revisions to the Quality Assurance Program Manual are issued as necessary to support effective implementation of the Quality Assurance Program. The NRC shall be notified annually, or 6 months after each refueling outage provided the interval between successive updates does not exceed 24 months, of any changes to the Quality Assurance Program description that do not reduce the commitments previously accepted. The revisions must reflect all changes up to a maximum of 6 months prior to the date of filing. If a change is contemplated which would reduce the commitments in the approved Quality Assurance Program description, the proposed change shall be submitted to the NRC for approval prior to implementing the change.

5.10.2 Revisions to the Quality Assurance Program Manual (Special Scope) are issued as necessary to support effective implementation of the Quality Assurance Program. NRC notification regarding changes to the Quality Assurance Program Manual (Special Scope) is not required. Z

5.10.3 Entergy Operations requires principal contractors and suppliers to submit their QA Program descriptions to Entergy Operations for evaluation and to provide notification of changes. Significant changes to such program descriptions shall be reported, as applicable, to the NRC in writing. In addition, principal contractors and suppliers are required to provide notification of significant changes to their subcontractor's quality assurance program description which has the effect of changing the quality assurance program of the principal contractor or Entergy Operations.

6.0 ATTACHMENTS

6.1 Attachment I - Quality Assurance Program Documentation

QUALITY ASSURANCE PROGRAM DOCUMENTATION

Identification	Description	Approval and Control
1. Quality Assurance Program Manual	Defines the Quality Assurance Program, assigns responsibilities to various organizations, and defines safety-related activities.	Prepared by Quality Assurance, concurred with by the affected organizations and approved by the Vice President, Operations, Waterford 3. Issued and controlled by Site Support.
2. Nuclear Management Manual	A set of Policies and Procedures which prescribe activities and responsibilities.	Prepared by cognizant personnel, issued and controlled by Headquarters, Entergy Operations and approved by Entergy Operations Management.
3. Waterford 3 Management Manual	A set of Policies, Directives, and Procedures which prescribe activities and responsibilities at Waterford 3.	Prepared by cognizant personnel, and approved by Waterford 3 Vice President, Operations. Issued and controlled by Site Support.
4. 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. The PCM applies to all personnel when they are within the Waterford 3 protected area.	Prepared by cognizant plant staff organizational units. Quality related procedures shall receive a quality related review. Approved by the General Manager, Plant Operations. Issued and controlled by Site Support.

QUALITY ASSURANCE PROGRAM DOCUMENTATION

Identification	Description	Approval and Control
5. Quality Assurance Procedures Manual	A set of procedures prepared and issued to specify and control the activities of the Quality Assurance organization.	Prepared by Quality Assurance and coordinated with other organizations as applicable. Approved by the Quality Assurance Manager. Issued and controlled by Site Support.
6. Site Support Procedures	A set of procedures which prescribe activities and responsibilities within the Site Support Group, which includes the Corporate site based Materials, Purchasing and Contracts department.	Prepared by cognizant personnel within the Site Support Group. Quality related procedures shall receive a quality related review. All procedures shall be approved, issued, and controlled by the Director, Site Support, with the exception of those pertaining to the Materials, Purchasing and Contracts group. These exceptions will be approved by the Manager, Materials, Purchasing and Contracts with concurrence by the Director, Site Support.
7. Design Engineering Procedures	A set of procedures which prescribe activities and responsibilities within the Design Engineering organization.	Prepared by cognizant personnel within Design Engineering. Quality related procedures shall receive a quality related review. Approved by the Director, Design Engineering or Department Manager Issued and controlled by Site Support.

QUALITY ASSURANCE PROGRAM DOCUMENTATION

Identification	Description	Approval and Control
8. Design Engineering Administrative Manual (DEAM)	A set of corporate level procedures which prescribe activities and responsibilities within the Design Engineering organizations.	Prepared by cognizant personnel within Design Engineering. Issued and controlled by the Manager, Engineering Support, Central Design Engineering. Quality related procedures shall receive a quality related review. Concurred with by the Site Director, Design Engineering for DEAM subsections applicable to their respective sites; and the Managers, Central Design Engineering. Approved by the Managers, Central Design Engineering for DEAM documents within their functional area of responsibility.
9. Plant Modification and Construction Procedures	A set of procedures which prescribe activities and responsibilities within the Plant Modification and Construction organization.	Prepared by cognizant personnel within Plant Modification and Construction. Quality related procedures shall receive a quality related review. Approved by the Director, Plant Modification and Construction. Issued and controlled by Site Support.
10. Nuclear Safety Procedures	A set of procedures which prescribe activities and responsibilities within the Nuclear Safety organization.	Prepared by cognizant personnel within Nuclear Safety. Quality related procedures shall receive a quality related review. Approved by the Director, Nuclear Safety or Department Manager. Issued and controlled by Site Support

QUALITY ASSURANCE PROGRAM DOCUMENTATION

Identification	Description	Approval and Control
11. Nuclear Training Procedures	A set of procedures which prescribe activities and responsibilities within the Nuclear Training Organization	Prepared by cognizant personnel within Nuclear Training. Quality related procedures shall receive a quality related review. Approved by the Manager, Nuclear Training. Issued and controlled by Site Support. 9

TITLE: **DESIGN CONTROL** EFFECTIVE DATE: 06/14/95

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: _____

QA MANAGER: _____ VICE PRESIDENT, OPERATIONS: _____

1.0 PURPOSE

1.1 The purpose of the design control program is to assure that the activities associated with the design of plant safety related systems, components, structures, and equipment and modifications thereto, are executed in a planned, controlled, and orderly manner.

2.0 REFERENCES

2.1 USNRC Regulatory Guide 1.64, Revision 2 (which endorses ANSI N45.2.11-1974 "Quality Assurance Requirements for the Design of Nuclear Power Plants.")

2.2 10CFR50.59.

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4.1 GENERAL MANAGER, PLANT OPERATIONS

The General Manager, Plant Operations is responsible for ensuring that the physical configuration of the plant remains in conformance with the approved design and for assuring that operating procedures reflect current design changes or modifications. The General Manager, Plant Operations is also responsible for approving design changes prior to implementation.

4.2 DIRECTOR, DESIGN ENGINEERING

The Director, Design Engineering is responsible for design activities, including the review of safety related changes in design to ensure the inclusion of quality assurance requirements, and for approval of final design documents and design changes at Waterford 3. 3

4.3 PLANT OPERATIONS REVIEW COMMITTEE

The PORC is responsible for review and recommendations concerning selected design changes and their affect on safety. Specific PORC responsibilities are delineated in this manual

4.4 QUALITY ASSURANCE MANAGER

The Quality Assurance Manager is responsible for ensuring that quality reviews of safety related changes in design are conducted. 3

5.0 DETAILS

5.1 DESIGN PROCESS

5.1.1 The design control program involves the preparation, review and approval of design documents, including the translation of applicable regulatory requirements and design bases into design, procurement, and procedural documents. The design control program assures and controls such activities as field design engineering; physics, seismic, stress, thermal, hydraulic, radiation, and FSAR accident analyses; associated computer programs; compatibility of materials; accessibility for in-service inspection; maintenance and repair; quality standards; and safety significance. When a new design or design change is prepared, appropriate quality standards shall be specified in the design documents.

5.1.2 Procedural control shall be established for design documents that reflect commitments of the FSAR. Design documents subject to procedural control include specifications, calculations, computer programs, the FSAR when used as a design document, 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.

5.1.3 Design activities shall be prescribed and documented on a timely basis and to the level of detail necessary to permit the design process to be carried out in a correct and efficient manner, and to permit verification that the design meets requirements.

5.1.4 Procedures shall be provided for performing a documented check to verify the dimensional accuracy and completeness of design drawings and specifications.

5.1.5 Applicable design inputs and their sources shall be identified and their selection reviewed and approved. Design inputs shall include, but are not limited to, those listed in Reference 2.1. Changes from specified design inputs, including the reasons for the changes, shall be identified, approved, documented, and controlled.

5.2 INTERFACE CONTROL

5.2.1 Internal and external design interface controls, procedures, and lines of communication shall be established and described in procedures 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.

5.3 DESIGN ANALYSIS

5.3.1 Design analyses shall be planned, controlled, correct, legibly documented, and in a form suitable for reproduction, filing, and retrieval. Analyses shall be sufficiently detailed as to purpose, method, assumptions, design input, references, and units such that a person technically qualified in the subject can review and verify the adequacy of the results without recourse to the originator. Calculations shall be identifiable by subject,, originator, reviewer, and date, or by other data such that the calculations are retrievable.

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

5.4 DESIGN VERIFICATION

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

5.4.2 If design verification is by other than qualification testing, it shall normally be completed prior to drawing release. In cases where this cannot be done and design verification is deferred, the justification for such action shall be documented and the unverified portion of the design appropriately identified and controlled. Design verification shall be complete prior to relying upon the structure, system, or component to perform its safety related function.

5.4.3 Design reviews shall address the following items, where applicable, to assure that:

a. The design inputs were correctly selected;

b. The assumptions necessary to perform the design activity are adequately described and are reasonable;

c. Applicable codes, standards, and specifications were utilized;

d. An appropriate design method was used;

e. The design inputs were correctly incorporated into the design;

f. The design output reasonably compares to design inputs;

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

h. Inspection and test acceptance criteria are identified;

i. Appropriate fire protection and security requirements have been met; and

j. The necessary design input and verification requirements for interfacing organizations were specified in the design documents or in supporting procedures or instructions.

5.4.4 Specialized reviews shall be used when uniqueness or special design considerations warrant.

5.4.5 When alternate calculations are used to verify the correctness of the original calculations or analyses, the appropriateness of assumptions, input data used, and the computer program or other calculation method used shall also be reviewed.

5.4.6 Procedures shall provide criteria that specify when verification should be by test. Test configurations and acceptance criteria shall be clearly defined and documented prior to starting the test. Prototype, component, or feature testing shall be performed as early as possible and shall be complete prior to the point when installation would be irreversible or prior to relying upon the structure, system, or component to perform its safety related function.

5.4.7 When a test program is used to confirm design adequacy, a prototype unit shall be qualified under adverse design conditions. Operating modes and environmental conditions shall be considered in determining the most adverse conditions.

5.4.8 Where the test is intended to verify only specific design features, the other features of the design shall be verified by other means. Test results shall be documented and evaluated by the responsible design organization to assure that test requirements have been met.

5.4.9 Regardless of title, individuals performing design verification shall not have:

a. Established the design inputs for particular design aspects being verified;

b. Specified a singular design approach;

c. Ruled out certain design considerations; or

d. Immediate supervisory responsibility for the individual performing the design except as provided for below.

5.4.10 The designer's immediate supervisor may perform the verification if the following conditions apply:

a. The supervisor is the only technically qualified individual; and

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

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

5.5 DESIGN CHANGES

5.5.1 Safety related design and specification changes, including field changes, shall be subject to the same type of design controls and approvals as the original. Qualified organizations other than the original designer may be used to modify or develop designs. Individuals preparing design changes shall review, as appropriate, the original design or latest design changes, and/or secure original design information. The original design and/or design change analysis as appropriate, shall be verified to ensure the analyses are still valid.

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

5.5.3 Working documents, such as drawings, specifications, and procedures, which are affected by design changes shall also be revised and controlled so that responsible parties remain informed.

5.6 DESIGN DEFICIENCIES

5.6.1 Errors and deficiencies in approved design documents, including design methods (such as design computer codes), that could adversely affect safety related structures, systems, and components shall be documented and action taken to ensure that all errors and deficiencies are corrected and that action is taken to prevent recurrence. Such corrective action shall be in accordance with Chapter 16 of this manual.

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

5.7 MAINTENANCE AND MODIFICATION

5.7.1 Inspection and performance testing shall verify that safety related structures, systems, and components are functioning adequately after maintenance or modifications are complete. The results shall be documented and maintained in accordance with applicable procedures.

5.7.2 Written safety evaluations of design changes shall be prepared in accordance with Reference 2.2.

5.8 DESIGN DOCUMENTATION AND RECORDS

5.8.1 Design documentation and records, which provide evidence that the design and design verification process were performed in accordance with the Quality Assurance Program requirements shall be collected, stored, and maintained in accordance with documented procedures. This documentation includes final design documents, such as drawings and specifications, and revisions thereto and documentation which identifies the important steps, including sources of design inputs that support the final design.

6.0 ATTACHMENTS

None

TITLE: PROCUREMENT DOCUMENT CONTROL EFFECTIVE DATE: 01/16/95

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: _____

QA MANAGER: _____ VICE PRESIDENT, OPERATIONS: _____

1.0 PURPOSE

1.1 Procurement document control applies to the preparation, review, approval, handling, and storage of documents used to obtain materials, spare and replacement parts, components, and services required to modify, maintain, repair, test, inspect or operate Waterford 3. Safety related vendors/contractors and subtier vendors are required, through procurement documents, to implement quality assurance programs consistent with the Entergy Operations Quality Assurance Program. It is the Waterford 3 policy that the quality and design of purchased replacement materials, components, and spare parts are equal to or better than the original item.

2.0 REFERENCES

2.1 USNRC Regulatory Guide 1.123, Revision 1, July 1977 (which endorses ANSI N45.2.13-1976, "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants.")

2.2 USNRC Regulatory Guide 1.89, "Environmental Qualification of Certain Electric Equipment Important to Safety for Nuclear Power Plants."

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4.1 DIRECTOR, DESIGN ENGINEERING

4

The Director, Design Engineering is responsible for ensuring the development of procedures for defining the performance and documentation of engineering evaluations, as requested or mandated; to establish requirements and controls when original technical or quality requirements cannot be determined for spare or replacement parts.

4.2 VICE PRESIDENT, OPERATIONS SUPPORT

4

The Vice President, Operations Support is responsible for:

4.2.1 Ensuring the development of procedures for defining the vendor and contractor selection process and defining the process for the preparation of purchase orders and contracts for site specific procurement;

4.2.2 Ensuring that appropriate procedures are developed and implemented for activities related to the preparation, review, approval, and control of requisitions; and procurement planning;

4.2.3 Vendor selection; coordination of contractor selection; preparation, review, and issuance of site specific purchase orders and contracts to support the procurement of material, equipment, spare, and replacement parts, and service;

4.2.4 Identifying quality classifications and establishing the related quality requirements, when applicable;

4.2.5 Administration of a receipt inspection program to assure acceptability and maintenance of quality related materials, parts, and components;

4.2.6 Coordinating the processing and review of procurement documents for equipment, parts, materials, and services in support of plant operations and station modifications, including maintenance and design changes; and

4.2.7 Establishing quality assurance and technical requirements in quality related procurement documents.

5.0 DETAILS

5.1 PREPARATION OF PROCUREMENT DOCUMENTS

5.1.1 Procedures are provided for the preparation, control, and review of procurement documents to ensure that quality requirements are correctly stated, inprocess and final inspection criteria are defined, and that appropriate controls are established.

5.1.2 Entergy Operations personnel are responsible for the preparation of procurement documents for safety related parts, components, systems, and services. Their responsibilities include procurement planning; preparation, review, approval, and control of procurement documentation; and assisting in vendor selection.

5.1.3 Organizations preparing procurement documents shall determine the applicable quality classification in accordance with approved procedures, codes, standards or design bases.

5.1.4 Procurement documents, as applicable, shall:

a. State the materials, parts, and components or the scope of work or services to be provided by the vendor;

b. Identify the quality classification of the item or service being procured;

c. Contain or invoke, by reference, the technical requirements, including drawings; test and specification requirements; special instructions for activities such as designing, handling, identification, special processes, fabrication, cleaning, erecting, packaging, shipping, extended storage, etc.; and applicable regulations, codes, and industrial standards;

d. 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/or submitted to Entergy Operations for information, review, and/or approval;

e. Identify the Entergy Operations Quality Assurance Program requirements which must be described and implemented in the vendor/contractor and subtier vendor quality assurance programs;

f. Identify those records to be retained, controlled, and maintained by the vendor and those to be delivered to Entergy Operations prior to use or installation of the item;

g. Establish the right of access for Entergy Operations and its agents to the vendor's facilities and records for source inspection and audits;

h. Identify the storage requirements and retention periods for records to be retained by the vendor;

i. Specify, for safety related procurement, the requirement for vendors to comply with 10CFR21 for reporting defects and noncompliances which could create a substantial safety hazard;

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

k. Procurement documents for on-site work by a vendor service representative shall require that any materials or replacement parts, and required documentation, shall be subjected to receiving inspection, records review, and warehouse issue by Entergy Operations.

5.1.5 Where commercial grade items are to be used in safety related applications, the procurement documents shall specify special inspections, tests, verifications, documentation or other methods required to assure suitability for the intended application.

5.2 PREPARATION OF REQUISITIONS FOR SPARE AND REPLACEMENT PARTS

5.2.1 Orders for spare and replacement parts shall be requisitioned to specifications and codes equivalent to those specified for the original equipment or those specified by a properly reviewed and approved revision.

5.2.2 In those cases where the original item or part is safety related and is found to be commercial grade and without specifically identified quality requirements, equivalent spare and replacement parts may be procured commercial grade provided the items are properly evaluated and dedicated for safety related use.

5.2.3 In those cases where the technical and/or quality requirements of the original item cannot be determined, an engineering evaluation shall be conducted and documented by qualified individuals to establish the requirements and controls.

a. This evaluation shall assure that interfaces, safety, interchangeability, fit, environmental compatibility, and function are not adversely affected or contrary to the FSAR, applicable codes, standards, and regulations.

5.2.4 Replacement electrical equipment in harsh environments shall be qualified in accordance with regulatory guides and specifications.

5.3 REVIEW AND APPROVAL

5.3.1 As a minimum, procurement documents shall be reviewed to verify that the procurement document contains the appropriate requirements identified in 5.1.4.

5.3.2 Reviews of procurement documents shall be performed by personnel who have access to pertinent information and who have an adequate understanding of the requirements and intent of the procurement documents. Performance of reviews shall be documented to provide objective evidence of accomplishment.

5.3.3 An independent review of procurement documents and subsequent revisions shall be accomplished prior to issuance to the vendor or contractor to assure that appropriate quality requirements have been imposed.

5.4 PROCUREMENT DOCUMENT CHANGES

Procurement document changes are subject to the same degree of control as utilized in the preparation of the original documents.

6.0 ATTACHMENTS

None

TITLE: INSTRUCTIONS, PROCEDURES AND DRAWINGS

EFFECTIVE DATE: 03/20/96

PREPARED BY: [signature]

DIRECTOR, NUCLEAR SAFETY: [signature]

QA MANAGER: [signature]

VICE PRESIDENT, OPERATIONS: [signature]

1.0 PURPOSE

1.1 Instructions, procedures, and drawings for the operational phase of Waterford 3 are developed to prescribe those activities that affect safety related functions. Activities affecting quality are accomplished in accordance with these documents. This Chapter defines the requirements for developing and controlling instructions and procedures for safety related activities.

2.0 REFERENCES

2.1 USNRC Regulatory Guide 1.33, Revision 2, February 1978 (which endorses ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants.")

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4.1 DIRECTORS/MANAGERS

Directors and managers are responsible for the development and approval of safety related procedures and instructions which affect activities within their area of responsibility and ensuring that Waterford 3 commitments and obligations are adequately addressed. In addition, directors and managers are responsible for ensuring that the appropriate individuals are trained, prior to the implementation of each new and revised procedure. 4

4.2 QUALITY ASSURANCE MANAGER

The Quality Assurance Manager is responsible for assuring that a quality review of safety related Waterford 3 procedures, instructions, drawings, and specifications, to ensure the inclusion of applicable Quality Assurance Program requirements, is accomplished.

4.3 PLANT OPERATIONS REVIEW COMMITTEE (PORC)

The PORC is responsible for reviewing and making recommendations concerning procedures required by Section 6.8 of the Technical Specifications and others which are used to assure the proper operation and maintenance of safety related equipment as determined by the General Manager, Plant Operations.

5.0 DETAILS

5.1 PREPARATION OF INSTRUCTIONS, PROCEDURES, AND DRAWINGS

5.1.1 Procedures shall be written and implemented in accordance with applicable codes, standards, and regulations to provide a controlled method for preparing, reviewing, changing, and approving instructions, procedures, and drawings. Each department shall have a governing procedure which describes the appropriate method for procedure development to assure consistency in preparation. The governing procedure shall incorporate the requirements of the Quality Assurance Program.

5.2 CONTENTS OF INSTRUCTIONS AND PROCEDURES

5.2.1 Instructions and procedures prescribing safety related activities shall identify any special equipment and conditions required to perform the activity, responsibilities, applicable quantitative and qualitative acceptance criteria, and provisions for documenting that activities were accomplished in accordance with the instructions and procedures.

5.2.2 The format of procedures may vary; however, procedures should include, as appropriate, the following elements:

a. Title;

b. Statement of applicability;

c. References;

d. Prerequisites;

e. Precautions;

f. Limitations and Actions;

g. Main Body;

h. Acceptance Criteria; and

i. Checklists;

5.2.3 When procedures contain critical steps and additional assurance is desired for plant operation and routine maintenance, procedures should contain verification signoffs. Verification signoffs shall be accomplished by a qualified person who does not have responsibility for performing the work or directly supervising the work with exception to plant operations activities by operators requiring verification by the SS/CRS who are direct supervisors.

5.3 REVIEW AND APPROVAL

5.3.1 Instructions, procedures, and drawings prescribing safety related activities shall be reviewed and approved by the individual in charge of the organization engaged in that activity prior to use. Procedures shall be established to clearly delineate the review process of procedures and delinea the approval cycle for procedures and procedure changes.

5.3.2 The reviewing organizations shall have access to pertinent background information upon which to base their approval and shall have adequate understanding of the requirements and intent of the document.

5.3.3 Whenever a safety related instruction, procedure, or drawing of one organization affects or involves the activities of another organization, the originating organization shall ensure that the affected organization reviews and concurs with the document content.

5.3.4 Comments generated by the reviewer shall be resolved by the authorizing organization, and the resolution concurred with by the reviewer prior to procedure approval. Comments which cannot be resolved by the author should be elevated to higher levels of management with the eventual resolution documented on the applicable comment sheet.

5.3.5 Referenced documents (such as drawings or manufacturer's technical manuals) in procedures shall be reviewed to determine their applicability and adequacy to satisfy the requirements of the procedure.

5.3.6 Procedures shall be reviewed to determine if the following conditions are satisfied:

a. The procedure/instruction is in compliance with upper tier procedures, the Quality Assurance Program, and the FSAR;

b. Appropriate qualitative and quantitative acceptance criteria are included for determining that safety related activities are satisfactorily accomplished;

c. The need for inspection, identification of inspection personnel, and documentation of inspection results have been properly specified;

d. The necessary inspection requirements, methods, and acceptance criteria have been identified; and

e. Inspection hold and verification points are clearly identified.

5.3.7 Procedure reviews are based on a dynamic process for assessing procedural adequacy by initiating procedure review, change or revision, based on new or revised source material potentially affecting the intent of procedures.

5.3.8 Applicable safety related procedures shall be reviewed following an unusual incident, such as an accident, unexpected transients, significant operator error, or equipment malfunction. The results of these reviews and any changes or corrective actions necessary shall be reviewed by the PORC. Applicable procedures shall be revised, as necessary, following any modification to a safety related system.

5.4 PLANT OPERATIONS REVIEW COMMITTEE (PORC)

The PORC reviews shall ensure that in addition to technical adequacy, the safety review performed by the authorizing department or group is correct and that, when applicable, a 10CFR50.59 safety evaluation is completed and correct.

5.4.1 The safety review shall determine if the procedure, its change, or its deletion:

a. Changes the design, description, function and/or operation of a system, structure, or component described in the FSAR;

b. Changes the procedures as described in the FSAR;

c. Conducts tests or experiments not described in the FSAR; or

d. Creates a condition or conducts an operation which exceeds, or could result in exceeding, the limits identified in the Technical Specifications.

5.5 TECHNICAL REVIEW AND CONTROL PROCESS

5.5.1 Procedures required by Technical Specification 6.8.1 and other procedures which affect nuclear safety, as determined by the General Manager Plant Operations, and changes thereto, shall be reviewed as follows:

a. Each procedure or change shall be independently reviewed by a qualified individual knowledgeable in the area affected other than the individual who prepared the procedure or procedure change. This review shall include a determination of whether or not additional cross disciplinary reviews are necessary. If deemed necessary, the reviews shall be performed by the review personnel of the appropriate discipline(s).

b. Individuals performing these reviews shall meet the applicable qualifications of ANSI/ANS 3.1-1978, Section 4.0, excluding subsections 4.5.2 and 4.5.3, and be approved to perform these reviews in a given area by the General Manager Plant Operations.

c. Those procedures and programs specified by paragraph 4.9.6 of Chapter 1, and changes in intent thereto, shall be reviewed by PORC and approved by the General Manager, Plant Operations prior to implementation.

d. Those procedures and programs specified by Technical Specification 6.8.1, and changes in intent thereto, with the exception of those specified in paragraph 4.9.6 of Chapter 1, shall be approved by the appropriate Group Head as specified in station administrative procedures.

e. Review of the procedure or procedure change will include a determination of whether or not an unreviewed safety question is involved. This determination will be based on the review of a written safety evaluation prepared by a qualified individual, or documentation that a safety evaluation is not required. PORC review, SRC review, and NRC approval of items involving unreviewed safety questions shall be obtained prior to station approval for implementation.

f. Written records of reviews shall be prepared and maintained in accordance with this manual.

5.6 PROCEDURE COMPLIANCE

5.6.1 All personnel should be cognizant of their responsibility to adhere to procedures and instructions. Prior to performing any quality related activity, all personnel are responsible to ensure that:

a. Procedures or instructions have been developed to control the activity;

b. They understand the content of the procedure or instruction and are capable of following it without deviation;

c. They understand that work must be stopped when a procedure or instruction cannot be specifically followed;

d. They understand the process to change procedures and instructions or at a minimum, know to notify their supervisor if an inadequacy is discovered; and

e. They understand that management demands that procedures and instructions be specifically followed or work must be stopped, regardless of cost or schedule.

5.6.2 Supervisors should routinely discuss procedural compliance with the personnel in their departments. When it is discovered that a procedure is not deficient but could be improved (quality is not affected), then work may continue as applicable and a formal procedure change request should be initiated. Procedural improvements are encouraged. Personnel should notify their supervisor if a procedure change should be expedited to improve ongoing or near future work.

6.0 ATTACHMENTS

None

TITLE: DOCUMENT CONTROL

EFFECTIVE DATE: 01/16/95

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: _____

QA MANAGER: _____ VICE PRESIDENT, OPERATIONS: _____

1.0 PURPOSE

1.1 The requirements and responsibilities for controlling the issuance of documents such as instructions, procedures, and drawings, and changes to these documents are established in this chapter.

1.2 Documents and their revisions which control safety related systems, structures, components, and activities are prepared, reviewed, and approved by authorized personnel before release or issuance in accordance with written procedures.

1.3 Individuals participating in an activity use the latest approved and applicable directions for performing the activity. Document control procedures provide measures to prevent the use of outdated documents.

2.0 REFERENCES

2.1 Regulatory Guide 1.33, Revision 2, February 1978 (which endorses ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants.")

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4.1 GENERAL MANAGER, PLANT OPERATIONS

5

4.1.1 The General Manager, Plant Operations is responsible for ensuring that as-built drawings are utilized for plant operation and maintenance upon completion of a related modification.

4.2 DIRECTOR, SITE SUPPORT

4.2.1 The Director, Site Support is responsible for the development of a document control system which includes procedures and instructions for the processing and distribution of:

a. The Safety Analysis Report;

b. The Plant Operating Manual; 5

c. Design documents, including drawings and specifications;

d. The Waterford 3 Management Manual;

e. Fabrication, construction, installation, inspection, test, maintenance, modification, and operation procedures;

f. Vendor technical manuals and service bulletins;

g. Safeguards information;

h. Safety related departmental procedures; and

i. Other documents as assigned.

4.3 DIRECTOR, DESIGN ENGINEERING

4.3.1 The Director, Design Engineering is responsible for the revision and update of controlled drawings and configuration documents to reflect design changes.

4.4 DIRECTORS/MANAGERS

4.4.1 Directors/Managers are responsible for the development and implementation of:

a. Safety related departmental procedures, as applicable; and

b. Other documents as assigned.

5.0 DETAILS

5.1 DOCUMENT CONTROL

5.1.1 Document control measures shall be prescribed by procedure and shall provide for:

a. The preparation, review, approval and issuance of documents, including their revisions, by authorized individuals or organizations;

b. Assuring that proper documents are used in performing an activity; and

c. Establishing and implementing a system for distribution control.

5.1.2 As-built drawings shall be stored in a controlled facility, with reproducible copies of those drawings available for use during operation and maintenance activities.

5.1.3 Controlled copies of documents shall be appropriately identified (e.g., stamped "CONTROLLED"). Obsolete, or superseded copies of controlled documents shall either be clearly identified as such, destroyed, or appropriately segregated (such as, entry into the records management system) to preclude their inadvertent use.

5.2 DOCUMENT REVIEW

5.2.1 Documents shall be reviewed in accordance with Chapter 5 of the Quality Assurance Program Manual. After review comments have been resolved, the documents shall be approved by the management of the responsible organization, effective dates shall be assigned, and the documents shall be distributed in accordance with applicable procedures and instructions.

5.2.2 Changes to safety related documents shall be reviewed and approved by the same organization that performed the original review and approval or by other responsible organizations delegated by Entergy Operations. Approved changes shall be included in the instructions, procedures, drawings, and other appropriate documents.

5.2.3 Field drawings and sketches which are prepared by Entergy Operations personnel to clarify or provide additional details for operation, maintenance, or testing shall be controlled. They shall be reviewed for accuracy by at least one qualified person other than the originator and shall be reviewed and approved by the originating group management before issuance. Revisions shall be handled in the same manner as the original issue.

5.3 DISTRIBUTION CONTROL

5.3.1 The distribution control system shall include:

a. Procedures that describe how documents are received, distributed, and controlled;

b. The identification of documents to be controlled;

c. Documents to be distributed in accordance with distribution lists;

d. Methods for dispositioning outdated documents to preclude inadvertent use;

e. Distribution and maintenance of a controlled document list to aid in the identification of document status; and

f. Methods to identify controlled documents; e.g., stamping with a control number.

5.3.2 Controlled documents shall be distributed prior to starting an activity and, if necessary, the controlled documents shall be available at the locations where the activities are performed.

5.3.3 Master lists of controlled documents shall be available at specific locations to preclude the use of superseded documents. The lists shall be prepared and updated in accordance with applicable procedures. The lists shall identify the current revision number of the instructions, procedures, specifications, drawings, interim changes, and procurement specifications.

5.4 TYPES OF CONTROLLED DOCUMENTS

5.4.1 The documents controlled under the Waterford 3 Quality Assurance Program include:

a. Safety Analysis Report;

b. Design documents including calculations, drawings, field drawings and sketches, specifications, change requests, and analysis;

c. Vendor Manuals;

d. Waterford 3 Management Manual;

e. Inspection and test procedures for test, fabrication, construction, installation, maintenance, modification, and operation;

f. As-built documents;

g. Quality Assurance Program Manual;

h. Emergency Plan;

i. Physical Security Plan;

j. Plant Operating Manual;

k. Quality Assurance Procedures;

l. Engineering Procedures;

m. Training Procedures;

n. Site Support Procedures;

o. Plant Modification and Construction Procedures;

p. Nuclear Safety Procedures; and

q. Approved Interim Change Documents.

6.0 ATTACHMENTS

None

TITLE: CONTROL OF PURCHASED MATERIALS, EQUIPMENT AND SERVICES

EFFECTIVE DATE: 01/16/95

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: _____

QA MANAGER: _____ VICE PRESIDENT, OPERATIONS: _____

1.0 PURPOSE

1.1 Safety related material, equipment, and services, whether purchased directly or through others, conforms to procurement document specifications as described in Chapter 4. Provisions are made, as appropriate, for source evaluation and selection, review for objective evidence of quality, inspection at source, and inspection upon delivery. In addition, products may be accepted by pre/post installation testing or qualification testing by Entergy Operations or an approved test laboratory.

1.2 Vendors' Quality Assurance Programs are reviewed at periodic intervals commensurate with the importance, quantity, and complexity of the product or services being purchased. These reviews may employ audits, surveillances, source verifications, independent inspections, or tests to verify that documentation, such as inspection records and certifications, are reliable and valid.

1.3 Proposals (bids or quotations) by vendors are reviewed to ensure that no exceptions are taken which would violate safety, technical, or quality requirements. The program requirements for control of purchased material, equipment, and services are contained in approved written procedures.

2.0 REFERENCES

2.1 USNRC Regulatory Guide 1.123, Revision 1, July 1977 (which endorses ANSI N45.2.13-1976, "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants.")

2.2 USNRC Regulatory Guide 1.33, Revision 2, February 1978 (which endorses ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants.")

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4.1 DIRECTOR, DESIGN ENGINEERING

5

The Director, Design Engineering is responsible for:

4.1.1 Assisting in the establishment of quality assurance and technical requirements in quality related procurement documents; and

4.1.2 Reviewing selected requests for spare and replacement parts designated EQ to determine their technical and quality requirements, if required.

4.2 VICE PRESIDENT, OPERATIONS SUPPORT

The Vice President, Operations Support is responsible for:

4.2.1 Ensuring the development of procedures for defining the vendor and contractor selection process and defining the process for the preparation of purchase orders and contracts for site specific procurement;

5

4.2.2 Vendor selection, the coordination of contractor selection, and the preparation and issuance of site specific purchase orders and contracts to support the procurement of material, equipment, spare and replacement parts, and services;

4.2.3 Performing inspections of site storage facilities; and

4.2.4 Establishing and maintaining a qualified suppliers list through the conduct of pre-award evaluations, annual evaluations, periodic audits and surveillances.

4.3 DIRECTORS/MANAGERS

Directors/managers are responsible for ensuring the initiation of procurement documents for equipment, materials, and services in support of their departmental activities.

4.4 QUALITY ASSURANCE MANAGER

The Quality Assurance Manager is responsible for assuring that appropriate quality standards are maintained throughout the procurement process.

5.0 DETAILS

5.1 QUALIFICATION OF VENDORS

5.1.1 Safety related equipment, materials, and services shall be obtained from vendors, contractors, and consultants contained on a qualified suppliers list (QSL), when required, to assure compliance with codes, standards, and regulatory commitments. Suppliers, contractors, and consultants shall be qualified for inclusion on the QSL through an evaluation of their technical and quality assurance capabilities for providing safety related items and services. Quality Assurance evaluations shall be conducted by appropriately certified personnel and the results documented and maintained in accordance with quality records management procedures.

5.1.2 The evaluation of vendors shall be based on one or more of the following criteria:

a. The vendor's ability to comply with the requirements of the Quality Assurance Program as applicable to the type of material, equipment or service being procured;
b. A review of the records and performance of vendors who have previously provided items and services similar to the type being procured; or

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

5.1.3 Re-evaluation and requalification of vendors on the QSL shall be made on a periodic basis, as specified in applicable procedures.

5.1.4 Suppliers of safety related structures, systems, components, and, services for Waterford 3 shall be informed through procurement documents of their requirement to comply with 10CFR21, when applicable, for reporting defects and noncompliances that could create a substantial safety hazard.

5.2 PROCUREMENT PLANNING

5.2.1 Procurement planning is a shared responsibility between the Site Support and Operations Support organizations.

5.2.2 Based on the relative importance, complexity, or quantity of the item or service, planning activities shall establish the following in accordance with approved procedures:

a. The need to perform surveillance(s) of the vendors/subtier vendors activities and/or products during the manufacturing process;

b. The need to participate in the inspection hold point program established by the vendor or to establish Entergy Operations mandatory hold points.;

c. The identification of documents, such as, qualifications of personnel or procedures to be generated and submitted to Entergy Operations for approval prior to start of work;

d. The identification of schedules, plans, drawings, design documents, test/inspection results, etc., to be submitted to Entergy Operations for approval or information;

e. The method for acceptance of items or services by Entergy Operations;

f. The scope and frequency of audits/surveillances required to monitor performance and/or maintain vendor qualifications;

g. The timing or schedule for each of the above, as applicable; and

h. The Entergy Operations organization or authorized representative responsible for performing each of the above as applicable.

5.3 AUDITS AND SURVEILLANCES OF SUPPLIERS

5.3.1 Audits and surveillances of safety related vendors during fabrication, inspection, testing, and shipment of materials, equipment, and components shall be planned and performed in accordance with written procedures to ensure vendor conformance to procurement requirements. These procedures shall include:

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.

5.3.2 In-process surveillances should be performed when procurement requirements cannot be verified during receipt inspection.

5.3.3 The effectiveness of the vendor's quality assurance program shall be assessed by Entergy Operations at intervals consistent with the importance, complexity, and quantity of the item or service.

5.4 RECEIPT INSPECTION AND ACCEPTANCE

5.4.1 Receipt inspection of safety related material, components, and equipment shall be performed in accordance with written procedures which provide for the following:

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

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

c. As applicable, 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

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.

5.4.2 Methods for product acceptance include evaluation of the vendor's QA Program, source inspection/surveillance, receipt inspection, pre/post installation testing, or qualification testing by Entergy Operations or a qualified test laboratory. The methodology to control these acceptance methods shall be specified in procedures. Acceptance by vendor's certificate of conformance or compliance is satisfactory, provided means are available to verify the validity of such certifications.

5.4.3 Acceptance by post installation testing should be used when it is difficult to verify the quality of the item without it being installed or in use.

5.4.4 Services, such as, engineering and consultant services or installation, repair, or maintenance work shall be accepted by one of the following methods: technical verification of data; audit; inspection; surveillance; or review of objective evidence for conformance to procurement documents.

5.5 PROCUREMENT AND DEDICATION OF COMMERCIAL GRADE ITEMS

5.5.1 Commercial grade material, parts, and equipment that are essential to the safety related functions of structures, systems, and components shall be evaluated for suitability of application. The evaluation results shall be documented.

5.5.2 The preparer of the purchase requisition is responsible for clearly identifying the commercial item to be procured and listing the receipt inspection requirements. The item selected shall be identical to the original or an approved alternate.

5.5.3 If the part is different from or an addition to the original design and constitutes a plant modification, Design Engineering shall review the material application and verify the part's suitability for the intended use.

5.5.4 Additional source verification, inspection, or test requirements shall be specified in the procurement documents, as necessary, to dedicate the commercial grade item for use in a safety related application.

5.6 SPARE AND REPLACEMENT PARTS

5.6.1 Spare and replacement parts for safety related systems, structures, and components shall be subject to Waterford 3 Quality Assurance Program controls, and to codes, standards, and technical requirements at least equivalent to or better than those used for the original equipment.

5.7 RECORDS

5.7.1 Quality Assurance records, when required by procurement documents, shall be collected and retained by vendors of safety related items. Suppliers shall furnish the following records, as a minimum, to Entergy Operations 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."

5.7.2 The review, evaluation, and acceptance of the required vendor records furnished to Entergy Operations shall be described in procedures.

5.7.3 Records associated with qualification testing (inplace or test laboratory) shall also be considered QA records and shall be submitted to, or made available to Entergy Operations.

5.7.4 Required procurement documents shall be available at Waterford 3 prior to use of purchased material, components, or equipment. The documentation shall be retained in accordance with approved procedures.

6.0 ATTACHMENTS

None

TITLE: IDENTIFICATION AND CONTROL OF MATERIALS, PARTS AND COMPONENTS

EFFECTIVE DATE: 01/16/95

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: _____

QA MANAGER: _____ VICE PRESIDENT, OPERATIONS: _____

1.0 PURPOSE

Identification and control of safety related materials, parts, and components are accomplished in accordance with approved procedures and apply to materials, parts, or components in all stages of fabrication, storage, installation, use, or removal from use. This chapter defines requirements for the identification and control of materials, parts, and components.

2.0 REFERENCES

None

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4 |

4.1 QUALITY ASSURANCE MANAGER

The Quality Assurance Manager is responsible for verifying adherence to applicable procedures for the identification and control of materials, parts, and components through the performance of periodic audits, surveillances, and inspections.

4.2 VICE PRESIDENT, OPERATIONS SUPPORT

The Vice President, Operations Support is responsible for: 4

4.2.1 Ensuring the development and maintenance of procedures for the identification and control of safety related items which are received, stored, and issued at the plant site;

4.2.2 Implementation of procedural controls necessary to ensure proper identification of items in storage, items issued for installation, and the control of items in storage which have limited shelf lives;

4.2.3 Verifying that materials, parts, and components are properly identified at receipt; and

4.2.4 Verifying the transfer of required identification or traceability information prior to items being subdivided while in stores control or at the time of issue from stores control. 4

4.3 DIRECTORS/MANAGERS

Directors and Managers are responsible for the inclusion of appropriate identification and control requirements in purchase or contract requisitions in order to ensure compliance with requirements of the Waterford 3 Quality Assurance Program and applicable codes, standards, and regulations. Directors and Managers are also responsible for developing and maintaining procedures for the identification and control of items drawn from stores, installed, or used.

5.0 DETAILS

5.1 IDENTIFICATION AND CONTROL

5.1.1 The identification of applicable safety related materials, parts, and components shall be by means of heat numbers, serial numbers, date coding, lot numbers, part numbers, or other appropriate means. Where physical identification on the item is impracticable or insufficient, physical separation, procedural control or other appropriate means shall be employed. However, physical identification shall be utilized to the maximum extent possible.

5.1.2 When identification markings are employed, they shall be clear, unambiguous, indelible, and not detrimental to the service life of the item.

5.1.3 The inclusion of identification requirements in design documents shall be checked during design verification by the design organization.

5.1.4 Items of production (batch, lot, component, part, etc.) shall be identified from the initial receipt or fabrication of the item up to and including installation and use. This identification shall relate the item to applicable design or other specifying documents.

5.1.5 Procedures shall 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 shall be verified and documented prior to release from storage areas to ensure that only correct and accepted items are used and installed.

5.2 TRACEABILITY

5.2.1 Inventory and issuance controls shall be established to ensure material traceability to storage and plant locations.

5.3 MAINTAINING IDENTIFICATION AND TRACEABILITY

5.3.1 Procedures shall be established and maintained to provide continued cross-referencing between the various identifications that have been used for traceability during an item's life (i.e., between the Architect Engineer's system, the NSSS supplier's system, manufacturer's systems, and the Waterford 3 Station Information Management System) in order to ensure continued retrievability of pertinent records.

5.3.2 Procedures shall be established and maintained for the control of item identification consistent with the planned duration and conditions of storage, such as:

a. Provisions for the maintenance or replacement of markings due to damage during handling or aging;

b. Protection of markings on items subject to excessive deterioration due to environmental exposure; and

c. Provisions for updating existing plant records.

5.4 LIMITED LIFE ITEMS

5.4.1 Items having limited shelf or operating life shall be identified and controlled to preclude the use of items whose shelf or operating life has expired. Use of such items beyond the specified limits shall be evaluated and documented justification provided.

6.0 ATTACHMENTS

None

TITLE: CONTROL OF SPECIAL PROCESSES EFFECTIVE DATE: 10/25/95

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: _____

QA MANAGER: _____ VICE PRESIDENT, OPERATIONS: _____

1.0 PURPOSE

Safety related activities identified as special processes are controlled to ensure they are accomplished in accordance with approved written procedures. Procedures and personnel performing special processes are qualified in accordance with applicable codes and standards and, where no appropriate standards exist, to Waterford 3 Quality Assurance Program requirements.

2.0 REFERENCES

2.1 USNRC Regulatory Guide 1.37, 3/73, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water Cooled Nuclear Power Plants." (which endorses ANSI N45.2.1-1973, "Cleaning of Fluid Systems and Associated Components During Construction Phase of Nuclear Power Plants.")

2.2 USNRC Regulatory Guide 1.33, Revision 2, February 1978 (which endorses ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants.")

2.3 SNT-TC-1A-1980, "Recommended Practice for NDE Personnel Qualification and Certification."

2.4 USNRC Regulatory Guide 1.58, Revision 2, September 1980 (which endorses ANSI N45.2.6-1978, "Qualifications of Inspection, Examination, and Testing Personnel for Nuclear Power Plants.")

2.5 ASME, Section XI, 1980 Edition through Winter 1981 Addenda (In-Service Inspection Program commitment.)

2.6 ASME, Section V, 1980 Edition through Winter 1981 Addenda

2.7 ASME Section V, 1989 Edition 4

2.8 ASME, Section IX, latest Edition and Addenda or as otherwise specified in applicable instructions, procedures, or specifications.

2.9 AWS D1.1, latest edition or as otherwise specified in applicable instructions, procedures, or specifications.

2.10 ANSI B31.1, latest edition or as otherwise specified in applicable instructions, procedures, or specifications.

2.11 UNT-010-004, "Control of Chemical Cleaning" 4

2.12 MM-006-100, "Maintenance Painting"

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4.1 GENERAL MANAGER, PLANT OPERATIONS

The General Manager, Plant Operations is responsible for the establishment, approval, and implementation of plant staff special processes and procedures and implementing the Entergy Operations, Inc. welding program. 3

4.2 DIRECTOR, PLANT MODIFICATION AND CONSTRUCTION

The Director, Plant Modification and Construction is responsible for the establishment, approval and implementation of procedures for selected special processes.

4.3 QUALITY ASSURANCE MANAGER

The Quality Assurance Manager is responsible for assuring the establishment of the control of special processes program and for verifying the effectiveness of its implementation through reviews, inspections, audits and surveillances. Additionally, the Quality Assurance Manager is responsible for approving NDE and inspection personnel certifications, and for the development and implementation of nondestructive examination and inspection procedures.

4.4 VICE PRESIDENT, ENGINEERING

The Vice President, Engineering is responsible for the administrative, programmatic, and operational control of the Entergy Operations, Inc. welding program. 3

5.0 DETAILS

5.1 SPECIAL PROCESSES SUBJECT TO CONTROLS

5.1.1 Special processes are those safety related special processes or operations that require special in-process controls and verification of essential characteristics. Acceptance may not be determined solely by inspection, test, or examination. Assurance that all steps of the process were properly carried out depends in part on the skill of the operator, use of specific equipment, and adherence to the qualified process procedures and controls.

5.1.2 Special processes include, but may not be limited to, the following as they are applied to safety related items:

a. Welding;

b. Heat treating;

c NDE;

d. Chemical cleaning;

e. Concrete and grout placement (seismic applications);

f. Reinforcing steel cadwelding (seismic application);

g. Brazing; and

h. Protective coatings (Level I Application). 5

5.1.3 The above listed processes, and other activities requiring special controls as determined by Entergy Operations management, shall be designated in approved procedures, drawings, or specifications, as appropriate.

5.2 SPECIAL PROCESS PROCEDURES

5.2.1 Special process procedures shall be qualified and approved before use and shall describe or reference documents pertaining to the following, as applicable:

a. Qualification/certification requirements for personnel involved with the performance of the special process;

b. Calibration, certification, or qualification requirements of equipment used in the performance of the special process;

c. Identification requirements for consumables to be utilized in the performance of the special process;

d. Documentation of the methods and results required to qualify the process;

e. Documentation of the activity and process results;

f. Process parameters and environmental conditions to be established or maintained;

g. Codes and standards applicable to the activity or process;

h. The activity and process acceptance criteria; and

i. The methods and sequences, when necessary, for the performance of the special process.

5.3 QUALIFICATION OF PERSONNEL, PROCEDURES, AND/OR EQUIPMENT

5.3.1 Qualification and certification may be provided by authorized agencies or by designated individuals, in writing, within Entergy Operations. Certification shall include necessary training followed by an examination of each individual. The period of validity for certification of personnel shall be in accordance with criteria described in applicable codes, standards, and specifications.

5.3.2 Personnel failing retest shall not be allowed to perform the special process until they have been recertified.

5.3.3 A Level III shall review and concur with procedures to assure they are in accordance with applicable requirements of governing codes, standards, and specifications. A Level III shall provide and/or assure training, examination, and qualification and recommend certification of Level I, II, and III personnel.

5.3.4 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 shall be defined.

5.4 DOCUMENTATION/RECORDS

5.4.1 A certified Level II or higher in the applicable discipline, shall evaluate and approve test/inspection results. Documentation of this evaluation and approval shall be maintained and controlled as a quality assurance record. Documents prepared by contractor personnel shall be independently reviewed and approved by an Entergy Operations Level II or III certified in the applicable discipline. The Entergy Operations review of contractor reports may be waived but only as approved in writing by the Waterford 3 QA Manager.

5.4.2 Qualification, certification, or calibration records of special process personnel, procedures, and equipment, or other records relating to the performance of special processes shall be prepared and maintained as quality assurance records. The Quality Assurance organization shall verify their existence and adequacy through reviews, audits, surveillances and inspections.

5.4.3 Special process control records of vendors may be retained or submitted to Entergy Operations as directed in procurement documents.

6.0 ATTACHMENTS

None

TITLE: **INSPECTION**

EFFECTIVE DATE: 03/20/96

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: _____

QA MANAGER: _____ VICE PRESIDENT, OPERATIONS: _____

1.0 PURPOSE

1.1 Inspections of maintenance, modification, repair, material receipt and storage activities for safety related items and activities are conducted in accordance with the requirements contained in this chapter and applicable codes, standards, and specifications.

1.2 In accordance with the Waterford 3 QA Program, inspections are planned and executed as required to assure conformance of an item to specified requirements. Characteristics to be inspected and inspection methods to be employed are specified and inspection results documented. Inspections are performed by persons other than those who performed or directly supervised the work being inspected.

2.0 REFERENCES

2.1 USNRC Regulatory Guide 1.33, Revision 2, February 1978 (which endorses ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants.")

2.2 USNRC Regulatory Guide 1.58, Rev. 2, September 1980 (which endorses ANSI N45.2.6 - 1978, "Qualifications of Inspection, Examination, and Testing Personnel for Nuclear Power Plants.")

2.3 ASME Code, Section XI, 1980 Edition through Winter 1981 Addenda

3.0 DEFINITIONS

3.1 See Appendix C

3.2 PEER/MAINTENANCE INSPECTOR - An ANSI N45.2.6 certified individual normally assigned to the line organization, but who reports to the QA Inspections unit during the inspection activity. This individual is not directly responsible for, or supervisor of, the activity being inspected.

4.0 RESPONSIBILITIES

4.1 GENERAL MANAGER, PLANT OPERATIONS

The General Manager, Plant Operations is responsible for:

4.1.1 The control and maintenance of ANII interfaces involving inspections related to modifications, repairs, and replacements under the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code (Code), Section XI, Section III, Division I Class 1, 2, 3, and MC components and their supports;

4.1.2 Support of the Peer Inspection program by recommending and providing personnel to be certified and to perform peer inspections; and

4.1.3 Preparing maintenance and modification work instructions which contain the required inspection holdpoints and criteria.

4.2 DIRECTOR, DESIGN ENGINEERING

4.2.1 The Director, Design Engineering is responsible for the control and maintenance of the Waterford 3 ASME Ten Year In-service Inspection Program. The Director, Design Engineering is also responsible for all ANII interfaces in matters related to the In-service Inspection Program. 5

4.3 QUALITY ASSURANCE MANAGER

The Quality Assurance Manager is responsible for:

4.3.1 The development and administration of the plant inspection program at Waterford 3;

4.3.2 Certifying inspection personnel;

4.3.3 Reviewing all safety related work authorizations (WAs),WAs containing hold points, or WAs involving special processes, to ensure the inclusion of quality requirements, and ensuring that quality reviews are conducted for all other initiated work authorizations; 6

4.3.4 Conducting or coordinating inspections of modifications and maintenance activities;

4.4 VICE PRESIDENT, OPERATIONS SUPPORT 5

4.4.1 The Vice President, Operations Support is responsible for the performance of receipt and storage inspections.

5.0 DETAILS

5.1 INSPECTION PROGRAM

5.1.1 Entergy Operations has three sources of inspection personnel for safety related activities at Waterford 3:

a. Quality Assurance personnel;

b. Line organization personnel (i.e. Peer/Maintenance Inspectors); or

c. Contract personnel.

5.1.2 Inspections shall be controlled as follows:

a. Inspections are performed in accordance with procedures approved by Entergy Operations;

b. Inspection results are documented, evaluated and their acceptability determined by responsible personnel in accordance with approved procedures;

c. Inspection procedures, inspection personnel qualifications and certifications are concurred with by the Quality Assurance Manager;

d. Inspections are performed by certified individuals other than those who performed or directly supervised the activity being inspected;

e. Inspection of operating activities may be conducted by second-line supervisory personnel or by other certified personnel not assigned first-line supervisory responsibility for conduct of the work; and

f. Inspection activities not conducted by Quality Assurance are periodically reviewed by Quality Assurance.

5.1.3 Inspections of operating activities or work functions associated with normal operation of the plant, routine maintenance, and certain technical support services routinely performed by the plant staff may be conducted by qualified and certified personnel selected by plant management.

5.1.4 Receipt and storage inspections are performed by qualified and certified personnel. For special inspections, such as nuclear fuel receiving, qualified and certified personnel reporting to the General Manager, Plant Operations may be utilized.

5.1.5 Inspections requiring expertise in a particular area, such as in-service inspection, certain nondestructive testing, and containment vessel leak rate tests and inspections, may be conducted by off-site Entergy Operations, or contractor personnel. In such instances, the inspection activities shall be conducted under the Waterford 3 Quality Assurance Program or an approved contractor program.

5.1.6 Individuals performing inspections shall be responsible for verifying that the M&TE used in the inspection meets the criteria noted in the procedure and that inspection results are within the specified acceptance criteria stated.

5.1.7 Inspections conducted by persons during on-the-job training shall be under the direct observation and supervision of a person certified to Level II or higher in the appropriate discipline. Verification of conformance is by the certified Level II until certification is achieved.

5.2 INSPECTION PROCEDURES, INSTRUCTIONS, AND CHECKLISTS

5.2.1 Inspection requirements shall be implemented using applicable procedures, instructions, checklists, drawings, and specifications.

5.2.2 Procedures, instructions, and checklists governing inspections shall provide for the following, as applicable:

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

b. Identification of individuals or groups who established inspection requirements;

c. Acceptance and rejection criteria;

d. Identification of individuals or groups responsible for performing inspections;

e. Identification of the points where inspections are required;

f. Identification of characteristics to be inspected;

g. A description of the inspection method;

h. Identification of required measuring and test equipment (M&TE);

i. Accuracy, precision and calibration requirements for M&TE;

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

k. A method for recording evidence of completing and verifying a manufacturing inspection or test operation;

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

m. Identification of specialized qualifications, certifications, or skills required by codes or standards for personnel performing inspections; and

n. Verification of material acceptability prior to installation or use.

5.2.3 Safety related inspection procedures shall be reviewed to verify the inclusion of the above requirements. 6

5.2.4 The procedure originator shall be responsible for ensuring that the accuracy and precision requirements of inspection equipment are sufficient to obtain reliable data. Accuracy and precision requirements shall be based on procurement and/or plant technical specifications. Individuals performing inspections shall be responsible for assuring the equipment used meets the criteria noted in the procedure.

5.2.5 Quality Assurance shall be responsible for verifying that inspection equipment meets the criteria of the procedure and that inspection results are within the acceptance criteria.

5.3 INSPECTOR QUALIFICATIONS

5.3.1 Inspectors shall be qualified through experience, education, and training programs to perform their assigned inspection tasks. Where required, inspectors shall be formally examined and certified. A file shall be maintained containing the credentials for each inspector. Inspector qualifications and certifications shall be kept current. Procedures shall contain qualification criteria for inspection personnel for the various types of inspections.

5.3.2 Procedures shall be developed to define the training programs/curriculum for inspection personnel.

5.3.3 The inspector qualification program shall be reviewed and concurred with by the Quality Assurance Manager or his designee. The Quality Assurance Manager shall be responsible for approving the certification of inspectors.

5.4 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 shall provide justification for the sample size and selection process and shall be concurred with by the Quality Assurance Manager or his designee. 5

5.5 INDIRECT INSPECTION

5.5.1 When it is not possible or practical to verify conformance of processed material or products by direct inspection, indirect control may be employed by observation of processing methods, equipment, and personnel. To ensure adequate control, both direct inspection and process monitoring shall be provided when control by only one method is considered inadequate.

5.5.2 A combination of inspection and process monitoring methods, when used, shall be performed in a systematic manner to assure that the specified requirements for control of the process and quality of the item are being achieved throughout the duration of the process.

5.5.3 Controls, where required, shall be established and documented for the coordination and sequencing of these activities at established inspection points during successive stages of the process or construction.

5.6 RECEIVING INSPECTION

Receiving inspection of purchased items and materials shall be performed by qualified and certified personnel in accordance with written procedures/instructions/checklists.

5.7 IDENTIFICATION OF HOLD POINTS

5.7.1 Work plans, procedures, and instructions for maintenance, modification or test of safety related structures, systems or components shall be reviewed to verify inclusion of inspection requirements, criteria, and hold points. Work in process shall not proceed past the identified hold points without satisfaction of inspection requirements.

5.7.2 Safety related suppliers and vendors shall be required through procurement documents, where applicable, to submit their manufacturing plans to Entergy Operations. This shall be done prior to manufacture in their shops or shops of their suppliers so that Entergy Operations has the opportunity to identify mandatory inspection hold points for witness by an Entergy Operations representative. Work may not proceed beyond these hold points without Entergy Operations consent.

5.7.3 Approval for deleting or waiving a hold point shall be received prior to continuing work past the hold point. Approval to delete or waive the inspection requirement shall be documented and shall be made in the same manner in which the inspection requirement was originally approved.

5.8 IN-SERVICE INSPECTIONS

5.8.1 The ASME In-service Inspection (ISI) Program is implemented for the purpose of periodically verifying the structural integrity of safety related pressure retaining components and their supports.

5.8.2 The ISI Program identifies the applicable components, examination methods and evaluation criteria necessary to fulfill the requirements of the ASME Code, Section XI, 1980 Edition through the Winter 1981 Addenda. Resulting data from the program shall be submitted to the Authorized Nuclear In-service Inspector (ANII) for review and acceptance. A summary of the results shall be submitted to the USNRC for review.

5.9 AUTHORIZED NUCLEAR IN-SERVICE INSPECTOR INTERFACES

5.9.1 Authorized Nuclear In-service Inspectors (ANIIs) shall be given full access to receiving inspection areas where code items and material undergo receiving inspection. All records relating to the procurement of Code items, as provided by suppliers and manufacturers shall be made available for review.

5.9.2 Work packages involving station modifications, repairs, or replacements of code items shall be presented to the ANII for establishment of ANII hold/witness points prior to commencement of work. ANII hold/witness points shall not be passed without prior written consent or a documented telephone conversation from the ANII. Waived hold points shall be documented.

5.9.3 The results of examinations performed under the Code during in-service inspections shall be presented to the ANII for review and acceptance. Inspection and examination data from code manufacturers which support the in-service inspection programs shall also be made available for ANII review.

5.10 RECORDS

5.10.1 Records of inspections, as a minimum, shall identify the:

a. Item inspected;

b. Date of inspection;

c. Inspector;

d. Type of observation;

e. Results or acceptability;

f. Person approving inspection; and

g. Reference to information on action taken in connection with nonconformances.

6.0 ATTACHMENTS

None

TITLE: **TEST CONTROL**

EFFECTIVE DATE: 03/20/96

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: _____

QA MANAGER: _____ VICE PRESIDENT, OPERATIONS: _____

1.0 PURPOSE

1.1 This Chapter defines the requirements for the control of functional, surveillance, and special tests. Testing is performed in accordance with appropriate procedures to demonstrate that safety related equipment and systems will perform satisfactorily in service and malfunctions are identified and corrected in a timely manner. Records document test results in accordance with the Waterford 3 Quality Assurance Program requirements.

1.2 Procedures include criteria for determining when a test is required and how testing activities are to be performed. Test procedures require a review of applicable specifications, test guidelines, and equipment technical manuals in order to determine required test equipment accuracy.

2.0 REFERENCES

2.1 Waterford 3 "In-Service Inspection (ISI) Program."

2.2 NUREG-1117, "Technical Specifications."

2.3 10CFR50.59, "Changes, Tests and Experiments."

2.4 USNRC Regulatory Guide 1.30, August 1972 (which endorses ANSI N45.2.4-1972, "Quality Assurance Requirements for the Installation, Inspection and Testing of Instrumentation and Electrical Equipment.")

2.5 USNRC Regulatory Guide 1.94, Revision 1, April 1976 (which endorses ANSI N45.2.5-1974, "Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During Construction Phase of Nuclear Power Plants.")

2.6 USNRC Regulatory Guide 1.116, Revision O-R, May 1977 (which endorses ANSI N45.2.8-1975, "Quality Assurance Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems.")

2.7 USNRC Regulatory Guide 1.8, Revision 1-R, September, 1975 (which endorses ANSI/ANS 3.1-1978, "Standard for Selection and Training of Personnel for Nuclear Power Plants.")

2.8 USNRC Regulatory Guide 1.58, Revision 1, September, 1980 (which endorses ANSI N45.2.6-1978, "Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel.")

2.9 USNRC Regulatory Guide 1.33, Revision 2, February 1978 (which endorses ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants.")

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4.1 GENERAL MANAGER, PLANT OPERATIONS

The General Manager, Plant Operations is responsible for ensuring the development and implementation of procedures for the Plant Operations staff testing activities. 2

4.1.1 PLANT OPERATIONS REVIEW COMMITTEE (PORC)

PORC is responsible for the review of test results which result in a change to the Technical Specifications or involve an unreviewed safety question. 2

5.0 DETAILS

5.1 TEST REQUIREMENTS

5.1.1 Test procedures shall be prepared in accordance with Quality Assurance Program requirements and the Technical Specifications and provide, as required, for the following:

a. Requirements and acceptance limits contained in applicable design and procurement documents;

b. Instructions for performing the test;

c. Identification of necessary references;

d. Test prerequisites such as:

1. Personnel protection and/or access limitation;

2. Calibrated instruments;

3. Adequate and appropriate equipment;

4. Trained, qualified, and licensed or certified personnel;

5. Completeness of item to be tested;

6. Suitable and controlled environmental conditions;
7. Provisions for data collection and storage;

8. Status of the system; and

9. Protection of connected or adjacent equipment.

e. Criteria for determining accuracy requirements of test equipment;

f. Inspection hold points;

g. Acceptance criteria;

h. Methods of documenting or recording test data and results;

i. Provisions for assuring test prerequisites have been met; and

j. Provisions for assuring system arrangement is acceptable after test.

5.1.2 Modified, repaired or replaced items of safety related equipment shall be tested in accordance with the original design and testing requirements or acceptable alternatives.

5.2 EVALUATION OF COMPLETED TESTS

5.2.1 Completed tests and test results shall be documented and evaluated by a qualified individual or group. This evaluation determines:

a. That the test results are adequate and need not be repeated;

b. That the recorded data reveals the adequacy of the equipment or system to meet the specified requirements; and

c. That nonconforming conditions are reported, evaluated, and justified or corrected.

5.2.2 Functional and surveillance test results shall be reviewed by the Plant Operations staff to verify that the requirements of the Technical Specifications have been met.

5.2.3 The results of special tests, that result in a change to the Technical Specifications or involve an unreviewed safety question, shall be reviewed by the PORC and the Safety Review Committee in accordance with the Technical Specifications.

5.3 ANOMALOUS INDICATIONS

If an anomalous indication is observed or detected during a test, the Shift Supervisor and/or Control Room Supervisor shall be notified immediately and the identifying individual shall initiate the required documentation. In the event that the anomalous indication is the result of a failure to meet the acceptance criteria, an investigation shall be performed and the complete test, or that portion which failed, shall be repeated and documented.

5.4 TECHNICAL SPECIFICATIONS SURVEILLANCE TESTING

5.4.1 A Technical Specification Surveillance Testing program including In-service Inspection shall be established in written approved procedures, or other appropriate documents, to ensure that safety related structures, systems, and components will continue to operate or function within technical specification and other operating license requirements; or, will act to put the plant in a safe condition if they violate requirements.

5.5 TEST RECORDS

5.5.1 All test records shall be retained whether the test was completed or not, and whether the results were acceptable or not. Test records, as a minimum, shall identify the:

a. Item tested;

b. Date of test;

c. Tester or data recorder;

d. Type of test/observation;

e. Results and acceptability;

f. Test procedure;

g. Action taken in connection with any deviations noted; and

h. Person evaluating test results.

6.0 ATTACHMENTS

None

TITLE: HANDLING, STORAGE, PACKAGING, AND SHIPPING

EFFECTIVE DATE: 01/16/95

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: _____

QA MANAGER: _____ VICE PRESIDENT, OPERATIONS: _____

1.0 PURPOSE

Safety related items are handled, stored, cleaned, packaged, and shipped in a manner to prevent deterioration, contamination, damage, or loss of identification. Procedures are provided for handling, cleaning, storing, maintaining while stored, and shipping specific items, equipment or material.

2.0 REFERENCES

2.1 10CFR71, Packaging and Transportation of Radioactive Material.

2.2 49 CFR USDOT, Parts 171 through 178.

2.3 USNRC Regulatory Guide 1.37, Revision 2 (which endorses ANSI N45.2.1-1973, "Quality Assurance Requirements for Cleaning Fluid Systems and Associated Components of Water Cooled Nuclear Plants.")

2.4 USNRC Regulatory Guide 1.38, Revision 2 (which endorses ANSI N45.2.2-1972, "Quality Assurance Requirements for Packaging, Shipping and Receiving, Storage and Handling of Items for Water Cooled Nuclear Plants.")

2.5 USNRC Regulatory Guide 1.39, Revision 2, September 1977 (which endorses ANSI N45.2.3-1973, "Housekeeping Requirements for Water Cooled Nuclear Power Plants.")

2.6 USNRC Regulatory Guide 1.33, Revision 2, February 1978 (which endorses ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operations Phase of Nuclear Power Plants.")

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4.1 GENERAL MANAGER, PLANT OPERATIONS

The General Manager, Plant Operations is responsible for:

4.1.1 Ensuring controls are established for handling, shipping (radioactive waste and spent fuel), cleaning, preservation, housekeeping, and preventive maintenance of safety related items (after installation);

4.1.2 The establishment and implementation of procedures required to perform preventive maintenance of items in storage and those that are installed;

4.1.3 Handling, preservation, and cleanliness of parts and components released for operation;

4.1.4 The establishment of cleanliness classifications (or zones) when opening components or systems for maintenance purposes which require specific internal cleanliness levels;

4.1.5 Flushes or chemical cleaning of plant systems;

4.1.6 Assuring that systems and components are appropriately placed and maintained in lay-up condition, when required;

4.1.7 Handling and storage of nuclear fuel; and

4.1.8 Housekeeping inside of the radiation controlled area and for the on-site handling, storage, packaging, cleaning and release for shipping to a transit carrier of radioactive wastes, and is responsible for providing technical expertise to assist in the on-site handling, storage, packaging, cleaning and release for shipping to a transit carrier of radioactive material.

4.2 DIRECTOR, PLANT MODIFICATION AND CONSTRUCTION

The Director, Plant Modification and Construction is responsible for:

4.2.1 Assuring the establishment and/or implementation of controls for handling safety related items released for construction;

4.2.2 The establishment and/or implementation of procedures required for handling and the maintenance of items withdrawn from storage and those that are installed but are not yet released to plant operations; and

4.2.3 The establishment of required cleanliness classifications (or zones) when opening components or systems for modification purposes which require specific internal cleanliness levels.

4 |

4.3 QUALITY ASSURANCE MANAGER

The Quality Assurance Manager is responsible for performing audits, and surveillances of Waterford 3 activities associated with handling, shipping, storage, and preventive maintenance of safety related items in storage.

4.4 VICE PRESIDENT, OPERATIONS SUPPORT

4 |

The Vice President, Operations Support is responsible for:

4.4.1 Handling, cleanliness, storage, preservation and inspection of items within storage and warehouse areas in accordance with Quality Assurance Program requirements; and

4.4.2 Packing and shipping outgoing items (except radioactive waste and spent fuel) and for housekeeping within the receiving and warehouse areas.

5.0 DETAILS

5.1 MATERIAL HANDLING, STORAGE, PACKAGING, AND SHIPPING

5.1.1 Under normal circumstances, the manufacturer's instructions or recommendations shall be followed and shall be implemented to maintain material integrity and protection. Deviations from manufacturer's recommendations shall be justified by an engineering evaluation and documented. Where documented manufacturer instructions do not exist, engineering shall establish and document appropriate handling, storing, cleaning, packaging, and shipping instructions.

5.1.2 Personnel performing handling, storage, packaging, and shipping activities shall be knowledgeable of the work to be performed and the procedures employed.

5.1.3 When required for particular items, special equipment and special protective environments shall be specified, provided, and their existence verified.

5.1.4 When required for critical, sensitive, perishable, or high-value articles, specific procedures shall be developed to ensure that proper handling, storage, packaging, shipping, and preservation methods are used.

5.2 RADIOACTIVE MATERIAL SHIPPING CONTAINERS

The containers used for shipping radioactive material shall be in accordance with 49 CFR Parts 171 through 178 and 10CFR71. If a USNRC licensed container is required then the container will be leased from a USNRC licensed supplier of containers.

5.3 CONSUMABLES

Procedural controls shall be established for the control of chemicals, reagents, fuels, (excluding nuclear fuel) oil, lubricants, and other consumables to assure proper storage, handling, utilization, and disposition.

5.4 MATERIAL HANDLING EQUIPMENT

Procedures shall be established for the testing of special handling tools and equipment such as cranes, forklifts, and cables. Procedures for material handling equipment shall establish requirements for inspections, frequency of inspections, and type of inspections. Lifting equipment used for handling safety related items shall have their rated capacity clearly marked.

5.5 MARKING

Instructions for marking and labeling items during packaging, shipment, handling, and storage shall be established as necessary to adequately identify, maintain, and preserve the items, including indication of the presence of special environments or the need for special controls.

5.6 PREVENTIVE MAINTENANCE

5.6.1 Preventive maintenance on items and equipment in storage shall be procedurally controlled and shall be in accordance with manufacturers recommendations, applicable codes, regulations, and standards. Deviations from these requirements shall be documented and an engineering justification provided.

5.6.2 Material receiving and storage areas shall be situated and controlled to minimize the possibility of damage, loss, loss of identification, or deterioration, from the time of receipt until the material is released for installation or use.

5.7 RECORDS

Applicable procedures, instructions, and manufacturers information shall be prepared, reviewed, released, and controlled in accordance with applicable codes, regulations, and standards.

6.0 ATTACHMENTS

None

TITLE: CORRECTIVE ACTION EFFECTIVE DATE: 01/16/95

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: _____

QA MANAGER: _____ VICE PRESIDENT, OPERATIONS: _____

1.0 PURPOSE

The Corrective Action Program assures that adverse conditions are promptly identified and corrected.

2.0 REFERENCES

2.1 10CFR50, Appendix B, Criterion XVI, "Corrective Action"

2.2 USNRC Regulatory Guide 1.33, Revision 2, February 1978 (which endorses ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operations Phase of Nuclear Power Plants.")

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4.1 GENERAL MANAGER, PLANT OPERATIONS

4.1.1 The General Manager, Plant Operations is responsible for:

a. Analyzing conditions for trends regarding equipment failure, and publishing aquarterly trend report 5

b. Performing immediate notification determinations and making appropriate notifications in accordance with 10CFR50.72 for identified adverse conditions; and

4.2 DIRECTOR, NUCLEAR SAFETY

4.2.1 The Director, Nuclear Safety is responsible for:

a. Performing reportability reviews of Condition Reports (CRs) in accordance with 10CFR50.73 and 10CFR21; and

b. Requesting or ensuring periodic independent assessments of the corrective action program to ensure that the process elements are adequately implemented.

4.3 DIRECTORS AND MANAGERS

4.3.1 Directors and Managers are responsible for:

a. Assuring that procedures are developed and maintained to implement the Corrective Action Program;

b. Assuring that personnel are familiar with the requirements of the Corrective Action Program;

c. Assuring departmental responsiveness to the Corrective Action Program, through problem identification and resolution.

4.4 QUALITY ASSURANCE MANAGER

4.4.1 The Quality Assurance Manager is responsible for:

a. Auditing and reviewing the Corrective Action Program to ensure acceptable implementation;

b. Administering the Condition Report process;

c. Reviewing Condition Reports to determine if the identified condition(s) represent a significant adverse condition; and

d. Administering a root cause investigation and trend analysis program for corrective action documents, and for issuing a periodic human performance trend report 5

e. Issuing Stop Work Orders when conditions warrant.

4.5 SAFETY REVIEW COMMITTEE

The Safety Review Committee (SRC) is responsible for maintaining oversight and assessing the effectiveness of the Corrective Action Program at Waterford 3. The SRC assessment shall include, at a minimum, the review of the trend reports and significant adverse conditions.

4.6 CONDITION REVIEW BOARD

The CRB is responsible for reviewing Controlled Maintenance Condition Identifications and Condition Reports to ensure adverse conditions receive the proper significance classification, priority, and dedication of resources.

4.7 ENTERGY OPERATIONS PERSONNEL

Entergy Operations personnel are responsible for promptly identifying and documenting adverse conditions on corrective action documents. Entergy Operations personnel are also responsible for recommending that an activity be stopped if the specific work is not being done in accordance with approved procedures, drawings, specifications, or regulatory requirements.

5.0 DETAILS

5.1 PROCEDURAL REQUIREMENTS

5.1.1 Procedures and instructions for correcting adverse conditions shall include provisions for:

a. Deficiency identification and immediate action;

b. Review for impact and assignment;

c. Investigate and analyze;

d. Corrective action planning and implementation;

e. Prioritization of corrective action;

f. Verification of completion; and

g. Verification of effectiveness.

5.1.2 Implementing procedures shall assign responsibility to each individual employed by Entergy Operations to promptly identify adverse conditions.

5.1.3 Implementing procedures shall be developed to ensure that each individual has the appropriate corrective action documents and guidance necessary to properly document adverse conditions.

5.1.4 Procedures shall also address corrective actions identified external to Entergy Operations and through internal programs such as trend analysis.

5.2 CONFIRMATION OF CORRECTIVE ACTIONS

5.2.1 The various corrective action processes shall be monitored to ensure acceptable completion of:

a. Cause determinations as appropriate;

b. Corrective actions which address identified causes;

c. Assignment of priority and level of management attention; and

d. Tracking and closure.

5.3 STOP WORK ORDER (SWO)

5.3.1 When an individual determines that specific work is not being performed in accordance with approved drawings, specifications, procedures, or regulatory requirements, the individual should recommend to the appropriate supervisor, that the activity be stopped until adequate corrective action is taken. The Quality Assurance Manager shall be notified if the activity does not cease.

5.3.2 The Quality Assurance Manager or his designee should verbally request that the adverse activity be stopped at the next safe stopping point.

5.3.3 If work is not stopped as requested, a Stop Work Order shall be issued by the Quality Assurance Manager or his designee, to the organization responsible for not terminating the work that is adverse to quality. Work shall not proceed until the Stop Work Order is released by the Quality Assurance Manager.

5.4 CONTRACTOR RESPONSIBILITY

Contractors performing services or activities pertaining to safety related systems, structures, or components shall identify adverse conditions according to this manual or their Entergy Operations approved QA Program.

5.5 RECORDS

Corrective action reports and supporting documentation shall become quality assurance records.

6.0 ATTACHMENTS

None

TITLE: QUALITY ASSURANCE RECORDS EFFECTIVE DATE: 01/16/95

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: _____

QA MANAGER: _____ VICE PRESIDENT, OPERATIONS: _____

1.0 PURPOSE

1.1 Quality assurance records are those completed records that furnish documented evidence of the quality of items or of activities affecting quality and those records required by the Technical Specifications. This chapter defines requirements for the control of quality assurance records.

2.0 REFERENCES

2.1 USNRC Regulatory Guide 1.88, Revision 2, October 1976 (which endorses ANSI N45.2.9-1974, "Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants."

2.2 USNRC Regulatory Guide 1.33, Revision 2, February 1978 (which endorses ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operations Phase of Nuclear Power Plants.")

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4.1 DIRECTOR, SITE SUPPORT 4

The Director, Site Support is responsible for:

4.1.1 Assuring the preparation of procedures for the execution of a document control and records storage program; and

4.1.2 Providing support for the records management program.

4.2 DIRECTORS/MANAGERS

Directors and managers are responsible for preparing and effectively implementing procedures which fulfill the applicable requirements of this chapter and applicable codes, regulations, and standards.

5.0 DETAILS

5.1 PROCEDURAL CONTROLS

5.1.1 Procedures shall be developed for processing, preservation, retrieval, transmittal, inspection, correction, retention, storage, and disposition of quality assurance records and, as a minimum, shall address the following:

a. Quality assurance records which are to be generated in accordance with applicable procedures, codes, standards, and regulations shall be specified;

b. Quality assurance records shall be legible, completely filled out with all applicable data, reproducible, and adequately identifiable to an item or activity; and

c. Quality assurance records shall be validated by stamping, initialing, signing, or otherwise authenticating and dating by authorized personnel.

5.2 TYPES OF RECORDS

5.2.1 Quality assurance records shall include, but are not limited to, the following:

a. Design and construction documents, such as:

1. Design drawings, specifications and work packages;

2. Results of reviews, inspections, tests, surveillances and audits;

3. Procurement documents;

4. Material certifications; etc.

b. Operational documents, such as:

1. Operating logs;

2. Maintenance and modification records;

3. Reportable occurrences;

4. Results of reviews, inspections, audits, tests, and material analysis;

5. Personnel qualification records;

6. Procedures and equipment qualification records;

7. Procurement documents and specifications;

8. Calibration records; and

9. Nonconformance and corrective action documents.

5.3 CORRECTIONS AND SUPPLEMENTS

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

5.4 RETENTION AND STORAGE OF RECORDS

5.4.1 Records shall be maintained current and complete in facilities that provide a suitable environment to minimize deterioration and to prevent damage or loss.

5.4.2 Quality assurance records stored on an interim basis shall be stored and controlled in a manner that protects them from damage or loss until they are submitted to permanent storage. Procedures shall define the interim storage requirements.

5.4.3 Procurement documents shall provide requirements for records storage and maintenance by contractors and suppliers when the required records are not submitted to Entergy Operations.

5.4.4 When quality assurance records have been lost, a search for copies shall be made to replace the lost records. If copies cannot be found, the lost records may be reconstructed if sufficient evidence exists to substantiate the reconstruction. If reconstruction is not possible, the original item or activity depicted by the record shall be evaluated and, when necessary, repeated and/or items replaced or requalified.

5.4.5 Quality assurance records shall be identifiable and retrievable. Procedures for retention and storage shall include requirements for maintenance, preservation, and protection against destruction by causes such as fire or flooding. Procedures shall also provide for the control of, access to, and accountability of records.

5.4.6 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, measures shall be taken to minimize the risk of damage or destruction from natural disasters, environmental extremes, or vermin.

5.4.7 Listings or indexes of the required records shall be developed and maintained. Retention times for records and location of record copies shall be indicated in a records index. Records may be retained by the suppliers and contractors and may include 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 audit reports;

2. Vendor audit reports; and

3. Pre-award quality assurance surveys.

5.4.8 Quality assurance records that are received from outside organizations shall be reviewed for technical adequacy, completeness, and legibility and their acceptance documented. Identified record deficiencies shall be documented for resolution.

5.4.9 Procurement documents shall specify the retention requirements when a manufacturer, supplier, consultant, or contractor are to retain radiographs, and when they are to transmit such radiographs to Entergy Operations.

6.0 ATTACHMENTS

None

TITLE: **AUDITS**

EFFECTIVE DATE: 03/20/96

PREPARED BY: _____

QA MANAGER: Gregory Davis

DIRECTOR, NUCLEAR SAFETY: R F Burski

VICE PRESIDENT, OPERATIONS: Mike Collins

1.0 PURPOSE

1.1 Audits are performed to verify compliance with the Quality Assurance Program requirements and to determine the program effectiveness. This chapter defines the requirements of the Waterford 3 Quality Assurance Audit Program.

2.0 REFERENCES

2.1 Waterford 3 Quality Assurance Program Manual, Chapter 16, "Corrective Action"

3.0 DEFINITIONS

3.1 See Appendix C

4.0 RESPONSIBILITIES

4.1 VICE PRESIDENT, OPERATIONS SUPPORT

The Vice President, Operations Support is responsible for planning, scheduling and conducting audits and surveillances of suppliers and contractors which provide materials, components, parts and services to be used in safety related applications.

4.2 QUALITY ASSURANCE MANAGER

The Quality Assurance Manager is responsible for planning, scheduling, and conducting audits of the Waterford 3 Quality Assurance Program, and its implementing procedures.

4.3 MANAGEMENT OF THE AUDITED ORGANIZATION

Management of the audited organization is responsible for investigating audit findings, scheduling corrective action including measures to prevent recurrence, and notification of the Quality Assurance organization in writing, of action planned or taken.

5.0 DETAILS

5.1 AUDIT PROGRAM

5.1.1 The objectives of the audit program are:

a. To ensure that the Waterford 3 Quality Assurance Program requirements are established in appropriate documents;

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 weakness and nonconformances; and

e. To verify correction of conditions adverse to quality identified during an audit.

5.1.2 Audits shall be performed in accordance with this manual, management requirements, and in areas where 10CFR50, Appendix B, requirements are being implemented. These areas shall include, as a minimum, the safety related activities associated with:

a. 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;

g. Interface control among Entergy Operations organizations and contractors/consultants; and

h. Procurement, vendors, manufacturers, and suppliers.

5.1.3 In addition to the above, audits shall be conducted of other activities defined as a special scope quality related activity in this manual.

5.2 SAFETY REVIEW COMMITTEE (SRC) AUDIT PROGRAM

5.2.1 The following audits of unit activities shall be performed under the cognizance of the SRC. These audits shall encompass:

a. The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months;

b. The performance, training, and qualifications of the entire unit staff at least once per 12 months;

c. The results of actions taken to correct deficiencies occurring in unit equipment, structures, systems, or method of operation that affect nuclear safety at least once per 6 months;

d. The performance of activities required by the Operational Quality Assurance Program to meet the criteria of Appendix B, 10 CFR Part 50, at least once per 24 months;

e. Any other area of unit operation considered appropriate by the SRC or the Vice President Operations;

f. The fire protection programmatic controls including the implementing procedures at least once per 24 months by qualified licensee QA personnel;

g. The fire protection equipment and program implementation at least once per 12 months utilizing either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year;

h. The Primary Coolant Sources Outside Containment Program at least once per 24 months;

i. The In-Plant Radiation Monitoring Program at least once per 24 months;

j. The Secondary Water Chemistry Program at least once per 24 months;

k. The Post-Accident Sampling Program at least once per 24 months;

l. The Basemat Monitoring Program at least once per 24 months;

m. The radiological environmental monitoring program and the results thereof at least once per 12 months;

n. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months;

o. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes at least once per 24 months; and

p. The performance of activities required by the Quality Assurance Program to meet the provisions of Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975 at least once per 12 months;

5.3 PRE-AUDIT ACTIVITIES

5.3.1 Quality Assurance shall provide an audit notification letter signed by the appropriate Quality Assurance manager or supervisor. The letter shall be submitted to the organization to be audited, and shall identify the audit dates and the areas to be audited.

5.3.2 Quality Assurance audits shall be planned and conducted in accordance with approved procedures. Audit planning shall include preparation of checklists or procedures that will ensure consistency and completeness in the audit evaluation. The Audit Checklist shall be a guide and shall not restrict the audit scope when additional investigation is needed.

5.3.3 Unresolved items noted during previous audits shall be reviewed prior to checklist preparation and included for re-audit as appropriate.

5.3.4 The organization being audited shall make every effort to have personnel and other necessary resources available for the scheduled audit. Any change in scope or schedule of the audit is coordinated with the organization being audited.

5.3.5 Quality Assurance should determine the need for scheduling a pre-audit conference with the organization being audited.

5.4 AUDIT PERFORMANCE

5.4.1 Audits should include objective evaluation of work areas, activities, and processes including a review of selected associated documents and records. Audits shall also include an objective evaluation of safety related practices, procedures, and instructions; the effectiveness of their implementation; and compliance with quality policies.

5.4.2 Any potential problem areas identified during the audit shall be immediately brought to the attention of the management of the responsible organization.

5.5 AUDIT PERSONNEL

5.5.1 Audits shall be conducted by qualified auditors who are experienced, trained, and familiar with the requirements and standards applicable to the area or activity being audited.

5.5.2 Audit team members shall be independent of any direct responsibilities for the activities which they audit.

5.5.3 Lead Auditors shall participate in an auditor training program and maintain proficiency through training, review and study of codes and standards related to quality assurance, or through active participation in the audit program.

5.5.4 Lead auditors shall be certified. Audit teams may include consultants or technical specialists as auditors under the supervision of a lead auditor.

5.6 POST-AUDIT ACTIVITIES

5.6.1 Upon completion of an audit, the audit team shall determine the need for and coordinate a post-audit conference, which shall include the presence of those individuals with the authority to effect corrective action (if required) for findings identified during the audit.

5.6.2 Audit findings shall be presented in written form. Written acknowledgment should be obtained from the audited organization for each audit finding.

5.6.3 Formal audit reports shall be issued within 30 working days of the post-audit conference or completion of the audit. Audit reports required by the SRC Audit Program shall be issued within 30 days. Distribution includes:

a. The Quality Assurance Manager;

b. The manager of the audited organization;

c. The SRC (receives only operations audit reports);

d. The manager(s) responsible for corrective action; and

e. The Vice President, Operations (for audit reports required by the SRC Audit Program). 5

5.6.4 It shall be the responsibility of the audited organization to review the audit report and to take action as necessary to ensure that corrective action is accomplished in a timely manner.

5.6.5 The Quality Assurance Manager, supervisor, or the audit team leader shall be responsible for follow-up action (including re-audits) as required to ensure that corrective action has been taken and is effective. Audit findings shall be documented in corrective action documents and noted in the audit report. Corrective actions and re-audits shall be documented with reference to the original audit.

5.7 CORRECTIVE ACTION PLAN

5.7.1 If, after investigation or evaluation of an audit finding, it is determined that a violation of specified requirements has occurred, the required response shall provide a corrective action plan which contains at a minimum the requirements of QAPM, Chapter 16 and include the following, as applicable:

a. The methods and, when applicable, the results of investigations or evaluations used to identify all affected hardware and software items;

b. The methods and, when applicable, the results of investigations or evaluations used to determine the root cause(s);

c. The action taken, or to be taken, to correct each affected hardware and software item;

d. The actions taken, or to be taken, to preclude the recurrence of the violation;

e. The scheduled completion date(s) for each of the applicable items identified above; and

f. The status of each uncompleted item at the time of response submittal.

5.7.2 In cases where the presented objective evidence does not support the conclusion that a violation of specified requirements has occurred, the response shall clearly state that fact, along with complete justification and objective evidence for the response.

5.7.3 At any time when required response dates or proposed implementation dates cannot be reasonably met, the audited organization shall develop a response, advising the QA Manager or appropriate supervisor of the new response date.

5.8 ANALYSIS OF AUDIT DATA

Audit data shall be analyzed by the Quality Assurance Manager or appropriate supervisor, who shall report any significant quality problems, including the need for re-audit of deficient areas, to the Director, Nuclear Safety and the Vice President, Operations.

5.9 PROCESS SURVEYS (SURVEILLANCES)

5.9.1 Entergy Operations Quality Assurance may conduct process surveys (surveillances) to verify that an item or activity conforms to specified requirements. These process surveys (surveillances) shall supplement regular audits. They are usually limited in scope, and usually involve:

a. A specific activity being performed;

b. A procedure or portion of a procedure; or

c. A specific area within a program.

5.9.2 Distribution of process survey (surveillance) reports include the appropriate Quality Assurance manager and the affected organization.

5.10 RECORDS

Audit records shall include audit plans, reports, written replies, and documentation of completion of corrective action. Other documentation, such as checklists, may be retained as quality records as necessary to support audit results.

6.0 ATTACHMENTS

None

TITLE: REGULATORY GUIDANCE DOCUMENTS EFFECTIVE DATE: 10/25/95

PREPARED BY: _____ DIRECTOR, NUCLEAR SAFETY: _____

QA MANAGER: _____ VICE PRESIDENT, OPERATIONS: _____

This appendix contains a listing of Regulatory Guides and ANSI Standards applicable to the Quality Assurance Program for Waterford 3. Reference FSAR Section 1.8 for a complete listing of regulatory guides and standards applicable to the design and operation of Waterford 3.

	Document	Comment
1.	Appendix B to 10CFR50 - "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants"	1. Criterion VII, Control of Purchased Materials, Equipment, and Services states that documentary evidence that material and equipment conform to the procurement requirements shall be available at the nuclear power plant or fuel reprocessing plant site prior to installation or use of such material and equipment. The Waterford 3 Quality Assurance Program requires that required documentary evidence be available at the site prior to use, but not necessarily prior to installation. This allows installation to proceed under specified conditions while any missing documents are being obtained, but precludes dependence on the item for safety purposes.
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 Reg. Guide and/or as shown in FSAR Chapter 13.

	Document	Comment
	B. ANSI/ANS 3.1-1978, "Standards for Selection and Training of Personnel for Nuclear Power Plants"	2. The qualification 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. Personnel performing Independent Technical Review functions meet the qualification requirements of NUREG-0731-1980 instead of Section 4.7.2 of ANSI/ANS 3.1-1978.
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. Waterford 3 applies the provisions of this Regulatory Guide and its endorsed standard to Class 1E equipment only. 2. Each safety 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 (Operational)" (Endorses ANSI N18.7-1976)	1. ANSI N18.7 references certain other standards to which Entergy Operations takes exception. Waterford 3 exceptions and alternatives are listed in this table.

Document	Comment
4. Regulatory Guide 1.33, (Continued)	2. Waterford 3 complies with Regulatory Position C.3 of Regulatory Guide 1.33, except under emergency conditions in which case Entergy Operations shall submit proposed changes to Technical Specifications or license amendments in accordance with 10CFR50.54 and or 10CFR50.71.
	3. ANSI N18.7, Section 3.4.2, Requirements for the on-site operating organization, states that [the activities of the individual or organizational unit responsible for verifying that the administrative controls and Quality Assurance Program is being effectively implemented] shall be periodically audited by designated personnel. Waterford 3 utilizes designated off-site personnel or an outside agency to perform assessments of the entire QA Program including the activities of the on-site audit personnel in lieu of periodic audits. Assessment results and other program evaluation documents such as the Trend Analysis Report are forwarded to Entergy Operations management for evaluation and determination of corrective action. 4

Document	Comment
4. Regulatory Guide 1.33 (Continued)	4. ANSI N18.7, Section 5.2.7, Maintenance and Modification: Waterford 3 preplans 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
	5. ANSI N18.7, Section 5.2.7.1, Maintenance Program: Repair of safety related equipment will be accomplished in accordance with approved procedures and/or vendor manuals.
	6. Waterford 3 will provide procedures for the activities in Appendix A of Regulatory Guide 1.33 as discussed in Section C-1 of the regulatory guide. However, Waterford 3 does not consider all activities listed to be "safety-related" (e.g., activities in 7.e).

Document	Comment
4. Regulatory Guide 1.33 (Continued)	7. ANSI N18.7, Section 5.2.15 states, "Plant procedures shall be reviewed by an individual knowledgeable in the area affected by the procedure no less frequently than every two years." Waterford 3 has programmatic control requirements in place that initiate procedure reviews upon identification of new or revised source material that has a potential to affect the intent of the procedure. A biennial audit is performed by the Quality Assurance Department to verify compliance with existing programmatic controls used to maintain procedures current.
5. Regulatory Guide 1.37, March 1973, "Quality Assurance Requirements for Cleaning 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 sources, Waterford 3 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.

Document	Comment
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 ANSI N45.2.3-1973 and the requirements associated with each zone are not consistent with the requirements for operating plant. Instead, procedures or instructions for housekeeping activities which include the applicable requirements outlined in Section 2.1 of ANSI 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.
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)	Personnel performing nondestructive testing meet the qualification requirements of ASNT Recommended Practice No. SNT-TC-1A-1980 and its applicable supplements.
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.

Document	Comment
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)	The interim storage of Quality Assurance Records will be conducted in accordance with approved procedures. At a minimum, Quality Assurance Records stored on an interim basis will be afforded the protection of a one-hour minimum rated facility or storage cabinet.
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)	No exceptions.
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.

Document	Comment
16. Regulatory Guide 1.144, Rev. 1, September 1980, "Auditing of Quality Assurance Programs for Nuclear Power Plants" (Endorses ANSI N45.2.12-1977)	Waterford 3 takes exception to the following paragraphs of ANSI 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. 2. 4.4 - Reports - Audit reports will be issued within 30 working days of the post-audit meeting. (Except audit reports required by the SRC Audit Program which are required within 30 days). 3. 4.3 - Conferences - Pre-audit and post-audit conferences shall be held only when deemed necessary by Quality Assurance or when requested by the audited organization
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.