AmerGen

An Exelon/British Energy Company

Clinton Power Station
R.R. 3 Box 228
Clinton, IL 61727-9351
Phone: 217 935-8881

10CFR50.54(a)

U-603535
1A.120
November 9, 2001

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Clinton Power Station, Unit 1
Facility Operating License No. NPF-62
NRC Docket No. 50-461

Subject: Clinton Power Station Quality Assurance Program Description Change

Pursuant to 10CFR50.54(a)(3), enclosed is Revision 29a of the Clinton Power Station (CPS) Quality Assurance Manual (QAM). Also enclosed with this revision are the revision matrices for revisions 29 and 29a. Revision 29a of the CPS QAM was approved on October 31,2001 and is submitted herein. Revision 29 was approved on August 11, 2001 and was not submitted to the NRC. The revision matrices summarize each change, provide the rationale for the change, and identify if the change reduces any commitments in accordance with the provisions of 10CFR50.54(a)(3). Revision 29a brings the CPS QAM up to date as of October 31, 2001.

The changes contained in Revisions 29 and 29a of the QAM were reviewed and approved in accordance with CPS procedures. An evaluation of the changes in revisions 29 and 29a concluded that none of the changes affect the authority, independence, and management reporting levels previously established for organizations performing quality assurance functions and thus, none of the changes reduce commitments in the quality assurance program description previously accepted by the NRC. The CPS quality assurance program continues to meet the requirements of 10CFR50, Appendix B.

If you have any questions regarding the enclosed information, please contact Mr. D. V. Basham at (217) 937-3144.

Respectfully,

J. M. Heffley
Vice President
Clinton Power Station

RSF/blf

Q004

Enclosures

cc: Regional Administrator - NRC Region III
NRC Senior Resident Inspector – Clinton Power Station
Office of Nuclear Facility Safety - Illinois Department of Nuclear Safety

AUTHORIZATION

The purpose of the Clinton Power Station (CPS) Quality Assurance Program is to provide for safe and reliable operation of CPS with planned and systematic actions necessary to provide adequate confidence that structures, systems, or components will perform satisfactorily in service. The quality assurance program has been designed to ensure the accomplishment of this objective and function in preventing or mitigating the consequences of postulated accidents, which could cause undue risk to the health, and safety of the public.

The quality assurance program described in this manual reflects CPS's policy and is applicable to all personnel and activities affecting the safe operation of the CPS. This manual has been prepared to document the systems in effect for assuring that operation of the CPS meets or exceeds quality requirements of applicable specifications, rules, and governing regulations.

The Nuclear Oversight Manager shall have complete authority and responsibility to promulgate the quality assurance program, to ensure its implementation, and to verify compliance there with, without undue regard for cost and schedule. This includes the initiation of stop work action for activities which are not in compliance with the requirements established by the CPS Quality Assurance Program or when conditions exist which prevent the attainment of the required quality.

It is realized that quality can only be achieved by those personnel who perform the work. Therefore, all personnel must consciously implement the requirements of the CPS Quality Assurance Program as the requirements apply to the activities being performed. Furthermore, it is the responsibility of all departments and personnel to comply with the requirements of the CPS Quality Assurance Manual to achieve full implementation and maintenance of this policy.

The effective date of revisions to this manual shall be thirty (30) calendar days from the date of distribution to allow for procedure changes and training.

CPS Site Vice President / Date 10/31/01

QUALITY ASSURANCE PROGRAM

CONCURRENCE AUTHORIZATION

The Clinton Power Station (CPS) Quality Assurance Program (QAP) applies to every member of the company performing safety and/or quality related work at CPS. Specific responsibilities shall be assigned by CPS management and supervision, consistent with the requirements described in the CPS Quality Assurance Manual. The main responsibility for the Quality Assurance Program is carried out by CPS departments. In recognition of the QAP responsibilities, this Quality Assurance Manual, Revision 29a, is given the following Departmental Concurrence Authorizations:

D. V. BASHAM,

ACTING NUCLEAR OVERSIGHT MANAGER

D. V. Basham / 10/30/01

PLANT OPERATIONS REVIEW COMMITTEE,

CONCURRENCE

for R. Svaleson / 10/30/01

TABLE OF CONTENTS

INTRODUCTION

AmerGen Energy Company, LLC, as owner of Clinton Power Station (CPS), has ultimate responsibility for the quality assurance program that is applied to CPS. The program is designed to meet the requirements of Title 10 of the Code of Federal Regulations (CFR), Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Processing Plants;" 10CFR71, Subpart H, "Quality Assurance," for Packaging and Transportation of Radioactive Material (with the exception of design, fabrication, assembly, and testing of packaging); and the American National Standard ANSI N18.7 (1976), "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants".

The CPS Quality Assurance Program applies to those activities associated with or affecting the ability of the plant's structures, systems, and components to function in preventing, or mitigating the consequences of postulated accidents which could cause undue risk to the health and safety of the public. These activities include operating, maintaining, repairing, refueling, modifying, and other associated activities such as radiological environmental monitoring, radioactive material packaging and shipping, fire protection, and security programs. The structures, systems, and components to which the activities and programs apply are delineated in Table 3.2-1 of the Updated Safety Analysis Report (USAR).

This Manual is arranged in eighteen chapters which correspond with the eighteen criteria contained in 10CFR50 Appendix B and 10CFR71, Subpart H. Each chapter is divided into two main sections which describe the scope of that chapter and a description of the requirements of the quality program. The Nuclear Oversight organization identifies the distribution and is responsible for the maintenance of this Manual in accordance with approved departmental procedures.

Appendix A of this Manual is a glossary of terms applicable to the CPS Quality Assurance Program.

Appendix B of this Manual details the minimum required Assessment frequencies.

Appendix C of this Manual details the scope of its application with respect to activities associated with Fire Protection, Security, Environmental, Radwaste/Augmented-D Systems, and Packaging and Transportation of Radioactive Material.

1. SCOPE

The purpose of this chapter is to describe the organizational structure, functional responsibilities and levels of authority concerning the performance of activities which affect the safety-related functions of structures, systems, and components (SSC's) for the Clinton Power Station (CPS).

2. REQUIREMENTS

2.1 Organizational structuring and functional responsibility assignments are based on recognition of quality assurance as an inter-disciplinary function with quality related activities being performed by many organizational components and individuals from top-level management to individual workers.

2.2 The authorities and responsibilities of persons and organizations performing quality related activities are established, assigned and documented. Those persons and organizations assigned quality assurance functions are given appropriate and sufficient authority and organizational freedom from cost and scheduling considerations to: identify quality problems; recommend solutions; verify implementation of the solutions; and control processing, delivery, installation, or utilization of nonconforming items until proper dispositioning has occurred.

2.3 The organizational structure and functional responsibility assignments are such that:
(1) attainment of quality objectives is by individuals assigned responsibility for specifying quality requirements or performing work to specifications; and
(2) personnel performing the quality assurance functions of program assessment, inspection and audits have direct access to responsible management, and organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations.

2.4 Activities affecting safety-related functions (job duties and responsibilities) have been identified. Effectiveness of the program is assured through inspections, program assessments/audits and by the authority/responsibility of individuals performing these activities to stop specific work activities where it appears that quality may be jeopardized. The Nuclear Oversight Manager has the authority to initiate a Stop Work Action. Upon the initiation of a Stop Work Action, the Plant Manager has the authority and responsibility to place the plant in a safe and stable condition.

2.5 Inspection personnel are provided with procedures and instructions prior to performing inspection operations. During plant operations emergencies, inspections may be performed under the direction of the duty shift manager. To further assure that inspections are done in a timely manner, specific points are identified in work documents with provisions for notification of witness, and hold points.

2.6 Organizational Interfaces

Activities affecting the quality of safety-related systems, structures and components are considered quality assurance program activities and are performed by, or under the cognizance of various CPS organizations. Any department may perform these quality assurance activities provided personnel are adequately trained, qualified/certified, and the work activities are performed in accordance with approved procedures and instructions. Problems associated with meeting the requirements of the Quality Assurance Program, or disagreements and/or disputes shall be brought to the attention of appropriate levels of management, including the CPS Site Vice President as necessary to obtain resolution.

2.7 Selected work may be delegated to qualified outside organizations by CPS departments. The responsibility for exercising engineering control rests with **Site Engineering**, and operational controls with CPS Plant Staff. Prior to initiation of work, the qualified individual(s) or organizational elements within CPS have their responsibilities identified for the control and quality of delegated work.

3. RESPONSIBILITIES

This section describes the organizational structure and responsibilities for managing and implementing the Quality Assurance Program for the operation of CPS.

3.1 Chairman of the AmerGen Management Committee and Chief Nuclear Officer (CNO).

The Chairman of the AmerGen Management Committee and CNO is the corporate executive with all the necessary authority and full responsibility for the safe and reliable operation of the nuclear facilities owned by AmerGen. The CNO is further responsible for nuclear quality control and assurance. The CNO represents the Company before the NRC. CNO has the authority to change the organization as needed, with proper notification to the NRC. The CNO is responsible for the corporate emergency preparedness of CPS.

3.2 Vice President-Nuclear Oversight

The Vice President – Nuclear Oversight reports to the Chairman of the Management Committee and CNO, and is the executive responsible for ensuring that the activities of the oversight organization, including audits, quality control, and assessments of the operating organization, are carried out.

3.3 Site Vice President

The CPS Site Vice President reports to the AmerGen Chief Executive Officer (CEO), and is responsible for accomplishing strategic objectives related to safety, economy, reliability, operation, and maintenance of CPS and implementation of the CPS Quality Assurance Manual.

3.4 Plant Manager

The Plant Manager reports to the CPS Site Vice President and is responsible for the overall facility operation including the direction of the operation, refueling, chemistry, radiation protection, radwaste, licensing, security, emergency preparedness, industrial safety; and activities of CPS in accordance with the operating license. This includes ensuring that the CPS Quality Assurance Program, as described in subsequent sections of this manual, is incorporated in plant procedures and implemented by the Plant Staff organization. The Plant Manager administers the Corrective Action Program (CAP) to assure conditions adverse to plant safety and/or quality are identified, evaluated, reported, corrected, reviewed, and trended. The Plant Manager is also responsible for maintaining the operating licenses and permits, the Updated Safety Analysis Report, and Environmental Report (ER) for continued programmatic compliance, and administers a tracking program for 10CFR21 items.

3.5 Site Engineering Director

The Site Engineering Director reports to the CPS Site Vice President and is responsible for the development, direction and overall coordination of power plant engineering activities performed by the Engineering Department for CPS. These responsibilities include: coordination of all interface with the Authorized Inspection Agency (AIA), provisions for the establishment of Authorized Nuclear Inspector (ANI) hold or witness points and access to facilities and records, records management, the CPS procedure initiation and revision process, document control, and operation and management of telecommunications and information services, and for corporate and plant integration in these functional support disciplines.. The Site Engineering Director establishes, maintains and implements the CPS software quality assurance program. The Site Engineering Director ensures these activities are performed in accordance with the requirements of the CPS Quality Assurance Program.

3.6 Business Operations Director

The Business Operations Director reports to the CPS Site Vice President and is responsible for providing direction of business planning, and the controller. The Business Operations Director ensures that these activities are performed in accordance with the requirements of CPS Quality Assurance Program.

3.7 Nuclear Safety Review Board

The Nuclear Safety Review Board (NSRB) reports to and advises the Chairman of the AmerGen Management Committee and Chief Nuclear Officer (CNO) and the Chief Executive Officer (CEO). The NSRB is responsible for the independent safety review function and functions in accordance with a written charter which delineates committee composition, responsibility and authority, subjects to be reviewed, reporting requirements and administrative controls under which the group operates.

3.8 Plant Operations Review Committee

The Plant Operations Review Committee (PORC) is an on-site committee whose function is to advise the Plant Manager on matters related to nuclear safety.

3.9 Operating Group Director – Nuclear Oversight

The Regional Operating Group (ROG) Director – Nuclear Oversight is responsible for implementation of the Nuclear Oversight Program at the regional level.

3.10 Nuclear Oversight Manager

The Nuclear Oversight Manager reports to the Regional Operating Group Nuclear Oversight Director and is responsible for Clinton Power Station's overall Quality Assurance Program. The Nuclear Oversight Manager directs the quality assurance activities of monitoring, assessments, inspections, and independent oversight of all areas related to the design, procurement, maintenance, modification, and operation of CPS. The Manager Nuclear Oversight interfaces with the Nuclear Regulatory Commission and the Authorized Inspection Agency for the Quality Assurance Program. The Nuclear Oversight Manager or the designated alternate has the responsibility and authority to stop unsatisfactory work during plant operation, as well as during plant modification, maintenance and in-service inspection periods, provided the health and safety of the public, or impact on capability to safely operate or shut down the plant are not adversely affected. The Nuclear Oversight Manager ensures the Independent Safety

Engineering Group (ISEG) review function is maintained separate and independent from line management.

3.11 Maintenance Director

The Maintenance Director reports to the CPS Site Vice President and is responsible for day-to-day maintenance activities including mechanical, electrical and control and instrumentation (C&I) maintenance, planning, direct support, and Fix It Now (FIN) activities. The Maintenance Director ensures that these activities are performed in accordance with the requirements of the CPS Quality Assurance Program.

3.12 Work Management Director

The Work Management Director reports to the CPS Site Vice President and is responsible for overall performance of on-line and outage scheduling including approval of outage and on-line strategies and milestones. The Work Management Director is responsible for managing station material inventory, for selecting qualified suppliers, for preparing and issuing purchase orders, specifying necessary technical, quality and commercial terms and conditions in purchase orders, and that appropriate reviews, are accomplished prior to release of a purchase order. The Work Management Director is also responsible for implementation of approved site modifications, projects, management / administration of key service contracts and facilities. The Work Management Director ensures that these activities are performed in accordance with the requirements of the CPS Quality Assurance Program.

3.13 Training Director

The Training Director reports to the Site Vice President and is responsible for the CPS Training program. The Training Director ensures that these activities are performed in accordance with the requirements of the CPS Quality Assurance Program.

1. SCOPE

The purpose of this chapter is to define how the CPS Quality Assurance Program applies to those activities such as design, procurement, fabrication, installation, modification, maintenance, repair, refueling, operation, inspection, and tests related to those systems, structures, and components as identified by the letter "B" or "H" in the Quality Assurance Requirements column in USAR Table 3.2-1. This program shall be documented by policies, procedures, or instructions.

2. REQUIREMENTS

2.1 The CPS Quality Assurance Program comprises all those planned and systematic actions necessary to provide adequate confidence that CPS structures, systems, and components **(SSCs)** will perform satisfactorily in service. Quality assurance includes quality control, which comprises the verification of those physical characteristics of material, structure, component, or system that provide a means to control the quality of the material, structure, component, or system to predetermined requirements.

2.2 The CPS Quality Assurance Program is based upon 10CFR50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." The requirements of 10CFR71, Subpart H, "Quality Assurance" for Packaging and Transportation of Radioactive Material are also included. The CPS Inservice Inspection (ISI) Program Manual further defines the Quality Assurance Program for ASME Section XI Code activities. Additionally, in USAR section 1.8, CPS is committed to carrying out the provisions of various NRC regulatory guides and industry standards, which further define Quality Assurance Program requirements.

The Regulatory Guides are:

- Regulatory Guide 1.8, Proposed Rev. 2, "Personnel Selection and Training";
- Regulatory Guide 1.26, Rev. 3, "Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants";
- Regulatory Guide 1.29, Rev. 3, "Seismic Design Classification";
- Regulatory Guide 1.28, Rev. 2, "Quality Assurance Program Requirements (Design and Construction)"
- Regulatory Guide 1.30, Rev. 0, "Quality Assurance Requirements for the Installation, Inspection and Testing of Instrumentation and Electric Equipment";
- Regulatory Guide 1.33, Rev. 2, "Quality Assurance Program Requirements (Operation)";
- Regulatory Guide 1.37, Rev. 0, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants";
- Regulatory Guide 1.38, Rev. 2, "Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water-Cooled Nuclear Power Plants";
- Regulatory Guide 1.39, Rev. 2, "Housekeeping Requirements for Water-Cooled Nuclear Power Plants";
- Regulatory Guide 1.58, Rev. 1, "Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel";
- Regulatory Guide 1.64, Rev. 2, "Quality Assurance Requirements for the Design of Nuclear Power Plants";
- Regulatory Guide 1.74, Rev. 0, "Quality Assurance Terms and Definitions";
- Regulatory Guide 1.88, Rev. 2, "Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records";

- Regulatory Guide 1.94, Rev. 1, "Quality Assurance Requirements for Installation, Inspection and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants";
- Regulatory Guide 1.116, Rev. 0-R, "Quality Assurance Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems";
- Regulatory Guide 1.123, Rev. 1, "Quality Assurance Requirements for Control of Procurement";
- Regulatory Guide 1.144, Rev. 1, "Auditing of Quality Assurance Programs for Nuclear Power Plants", and;
- Regulatory Guide 1.146, Rev. 0, "Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants".

2.3 The Quality Assurance program description also includes the following sections of the CPS Operational Requirements Manual (ORM) and the Updated Safety Analysis Report (USAR). The specific sections are as follows:

- ORM Section 6.8.2, Procedures and Programs - Review and Approval;
- ORM Section 6.8.3, Procedures and Programs - Temporary Changes
- ORM Section 6.10, Record Retention

- USAR Section 13.4, Review and Audit
- USAR Table 3.2-1

2.4 Quality Assurance Program Revisions

The Quality Assurance program is reviewed on an ongoing basis and revised as necessary to assure its continued effectiveness. The Quality Assurance Program Description, including the Quality Assurance Manual, is reviewed and updated in accordance with the requirements of 10CFR50.71, *MAINTENANCE OF RECORDS, MAKING OF REPORTS.* Changes made to the CPS Quality Assurance Manual which: 1) change or affect authority, independence, or management reporting levels previously established for organizations performing quality assurance functions; or 2) reduce commitments or effectiveness of quality assurance functions specifically delineated in the Quality Assurance Program Description shall be submitted and approved by the NRC prior to change implementation in accordance with 10CFR50.54(a).

2.5 Training

Each department head is responsible for the proper qualification of assigned personnel performing activities related to CPS. This includes establishing and maintaining documented training programs to ensure personnel performing activities affecting quality are appropriately trained in the principles and techniques of the activity being performed; instructed as to purpose, scope, and implementation of governing documents; and maintain required proficiency. Programs are formulated to provide training based on individual employee experience and position and fulfill regulatory requirements, where applicable. Training records are maintained for each employee. Departmental training procedures/instructions require that indoctrination and training programs include objectives, content of program, attendees, and date of attendance. Applicable departmental procedures and instructions require that the proficiency of personnel performing and verifying activities affecting quality is maintained by retraining, re-examining, and/or re-certifying, as determined by management or program commitment.

2.6 CPS Quality Assurance Program Evaluations

Regular reviews of the CPS Quality Assurance Program to assess the scope, status, adequacy, compliance, and overall effectiveness are performed under the direction of the Vice President - Nuclear Oversight. This review function consists of meetings with key Quality Assurance personnel, as well as review of assessments/audits and reports, and the performance of a CPS Quality Assurance Program assessment, which is preplanned and documented. Corrective action required as a result of adverse conditions identified during the assessment, are documented, tracked, and completion is verified and documented. Independentassessments of other organizations performing activities related to quality are accomplished regularly under the direction of the **Nuclear Oversight Manager**.

3. RESPONSIBILITIES

3.1 Vice President - Nuclear Oversight

a. Directs reviews for overall effectiveness of the CPS Quality Assurance Program on a regular basis.

3.2 CPS Departments

a. Implement and comply with the CPS Quality Assurance Program.

b. Train and qualify/certify, as required, personnel who perform quality activities associated with CPS.

c. Maintain procedures/instructions to the extent necessary to carry out activities affecting quality.

3.3 CPS Plant Staff

a. Operate CPS in a safe and reliable manner.

3.4 **Site Engineering**

a. Implement the design control program for CPS, including design interface control activities.

b. Implement the Inservice Inspection Program

c. Maintain a Document Control Program to control the issuance of documents, such as instructions, procedures and drawings, including changes thereto, which prescribe all activities affecting quality.

d. Establish, maintain, and implement a Records Management Program including the CPS Records Storage Facilities.

e. Establish, maintain and implement the CPS Software Quality Assurance Program.

3.6 Nuclear Oversight

a. Perform activities to ensure the established quality assurance program meets requirements and is effectively executed.

b. Assure corrective actions for identified problems are effective.

3.7 Nuclear Training

a. Maintain and implement a Licensed Operator Training program, all INPO accredited programs, and a General Employee Training program.

3.8 Maintenance

a. Maintain CPS in a safe and reliable mode.

3.9 Work Management

a. Schedule overall performance of on-line and outage activities, and manage station material inventory.

b. Implement approved site modifications and projects to meet station goals and objectives, including management and administration of key service contracts.

3.10 Regional Operating Group Supply Management

a. Evaluate suppliers' technical abilities and quality assurance programs and maintain qualified suppliers list.

1. SCOPE

The purpose of this chapter is to establish the requirements, responsibilities and control measures for assuring design bases and regulatory requirements are correctly translated into design documents. The scope of design control covers all phases of engineering design, including: conceptual design selections; identification of design inputs (criteria and bases); identification and control of design interfaces; production of design documents, calculations and analyses; procurement-related engineering; design verification; and installation engineering support.

2. REQUIREMENTS

2.1 Design control measures are established to assure design changes meet the appropriate performance and quality requirements. These design control measures are commensurate with those applicable to the original design and assure that design changes are designed and implemented in accordance with applicable codes, standards and regulatory commitments.

2.2 Station Engineering has overall responsibility for design control activities at CPS. These design control activities are managed within the context of the Configuration Management Program, which also includes final design approval of design changes for incorporation into the plant. Processing of a design change, and the associated design/design change documents under this program ensures appropriate participation and awareness by CPS organizations throughout the design development and installation process.

2.3 Provisions of this program also ensure each design change receives a thorough safety screening / evaluation, that meets regulatory commitments.

2.4 New design or design changes shall be defined by drawings, specifications, change notices or other documents as prescribed in design control procedures. The organization actually performing the design work, either Engineering, Work Management, or a qualified consultant-engineer is required to include the following considerations in the initiation / preparation of each design change:

a. Appropriate design bases, regulatory requirements, safety requirements, performance objectives, design margins, special processes, material and testing requirements, and operating objectives are adequately translated into the various design documents.

b. Appropriate design analysis (e.g., physics, seismic, stress, thermal, hydraulic, radiation and accident) is part of the design process.

c. Accessibility requirements for operation, testing, maintenance, in-service inspection and repair are included in the design.

d. Necessary installation, inspection and test acceptance criteria are included in the design documents or modification packages.

e. An evaluation to determine if the proposed design change involves " a change that requires NRC approval pursuant to 10CFR50.59".

f. Design control measures shall include criticality physics and radiation shielding for radioactive material shipments.

g. Design control measures shall include provisions to assure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled.

2.5 The organization which produces and approves the design, design change, or design change documents shall maintain detailed procedures to control and document performance of the following design activities:

a. Identification and selection of design inputs.

b. Identification and control of interfaces between organizations required to provide input to, review or approve final design products.

c. Performance of calculations or analyses, which demonstrate that design products satisfy the design inputs, including those performed using computer codes.

d. Production, review, approval and revision of drawings, specifications, data sheets or other design output documents.

e. Classification and specification of technical requirements for equipment or material procurements associated with the design/design change.

f. Verification that the design inputs, interfaces, calculations and final design products are adequate and correct; and the installation satisfies all specified design requirements.

2.6 The form and structure of the procedures and instructions used to accomplish these activities may vary dependent upon the complexity of the design and the different organizations involved in the design development.

2.7 An independent group or person within the organization actually producing the design will normally do design verification for the final design products. When this is a consultant-engineer organization, SITE ENGINEERING may choose to conduct, or direct additional independent design verifications.

2.8 This verification consists of a check of design adequacy by such methods as design reviews, use of alternate calculations or methods, or performance of verification or qualification testing. The method, or combination of methods, used to verify a design will be selected on a case-by-case basis. The selection will be based on consideration of such things as: a) uniqueness of the design or application, b) complexity of the design, c) prior history of use, d) importance to safety, and e) consequences of failure. CPS operating phase design verification other than qualification testing of prototype or lead production unit will, where practical, be completed prior to installation and operation. In those cases where this timing cannot be met, the design verification may be deferred, providing the justification for this action is documented and the unverified documents related to the design are appropriately identified and controlled. However, design verification shall be completed prior to the component, system or structure being released for operation.

2.9 Verification by test will normally be included in procurement documents that require the supplier to perform the test and use the most severe design conditions as acceptance criteria. These procurement documents shall require the test procedure, including acceptance criteria, be submitted to CPS or a designee for review and approval prior to performance of the test.

2.10 When a verification test cannot be performed prior to installation, proposed testing programs shall be reviewed and approved by CPS to ensure no unresolved safety questions are involved and the testing is conducted within licensing limitations prior to the point when the installation would become irreversible.

3. RESPONSIBILITIES

3.1 CPS Plant Staff

a. Initiate or concur with design change requests for CPS and forward to Site Engineering for review and approval.

b. Assure proposed design changes affecting nuclear safety and associated safety evaluations have been reviewed by the Plant Operations Review Committee.

3.2 Site Engineering

a. Implement the design control program for CPS, including design interface control activities.

b. Perform or obtain design services, such as preparation and review of design technical documents for all design changes.

c. Review and approve design change requests for incorporation into the plant.

d. Provide "as built" information to Regulatory Assurance for updating the USAR to reflect current plant conditions.

e. Determine if the proposed design change involves " a change that requires NRC approval pursuant to 10CFR50.59".

f. Coordinate the processing of design changes, assigning control numbers, recording progress, confirming procedural compliance, recommending operational readiness of affected hardware and transmit completed design change packages to Nuclear Support for processing, and retention.

g. Issue or coordinate issuance of data and reports which provide status of design changes.

3.3 **Regulatory Assurance**

a. Review and evaluate Technical Specification changes and changes that require NRC approval pursuant to 10CFR50.59 identified during the design change process and obtain the necessary reviews and approvals.

3.4 **Work Management**

a. Perform engineering duties associated with classification and specification of technical requirements for equipment or material procurements associated with design / design changes.

3.5 Maintenance

a. Incorporate approved design changes into CPS.

b. Employ controls that prevent unauthorized changes to the "as-built" and "as-modified" condition of the plant.

1. SCOPE

The purpose of this chapter is to define the requirements and responsibilities for the preparation, review, release, and revision of procurement specifications, purchase orders, and associated documents to assure the procurement of items and services are properly controlled.

2. REQUIREMENTS

2.1 Measures are established for the preparation, review, approval and processing of purchase requisitions, purchase specifications, purchase orders and revisions to these documents to ensure materials, parts, components and services for CPS are properly specified and procured.

2.2 Purchase requisitions are prepared in accordance with documented procedures that require:

a. Applicable specifications, drawings, quality requirements, and related documents be included or referenced.

b. Appropriate quality requirements, including supplier documents and records to be prepared, submitted or retained, and made available for purchaser review or approval are included or referenced.

c. Appropriate quality assurance program requirements be included or referenced.

d. Provisions for the purchaser's right of access to supplier's facilities and records (including sub-tier suppliers) for source inspection and audit be specified.

e. Provisions for supplier's reporting and disposition of nonconformances and requirements for hold points and release control are clearly identified.

f. Suppliers extend the applicable quality requirements, including purchaser's access to facilities and records for inspection and audit, to their sub-tier suppliers.

2.3 Technical and quality requirements for procurement of items and services are specified. Purchase requisitions are approved by the Manager or Director of the originating organization, or designee, and forwarded for processing.

2.4 Based on the approved purchase requisition, the necessary purchase orders or contract documents are prepared. Prior to release of the procurement document, a review is performed to ensure the requirements ("a" through "f" above) have been met. Purchase Orders or contracts are placed only with suppliers determined to be capable of meeting the procurement requirements. This determination is based on evaluation of the supplier's quality assurance program, the supplier's technical capabilities and the supplier's commercial ability.

2.5 Changes, revisions or amendments to requisitions and procurement documents are subject to the same requirements as was the original document, except for editorial changes and commercial terms and conditions.

3. RESPONSIBILITIES

3.1 CPS Departments

a. Initiate and approve purchase requisitions for material, parts, components or services for CPS.

3.2 **Work Management**

a. Review purchase requisitions for QA requirements.

b. Prepare procurement documents for award to qualified suppliers.

c. Review procurement documents for completeness.

d. Specify technical and quality requirements for materials, parts, components or services for CPS.

e. Provide specifications for procured materials, parts, components or services for CPS.

3.3 Regional Operating Group Supply Management

a. Evaluate suppliers' technical abilities and suppliers' quality assurance programs.

1. SCOPE

The purpose of this chapter is to define the requirements and responsibilities for the generation and use of instructions, procedures, drawings, or related material to control activities, which affect quality.

2. REQUIREMENTS

2.1 Each CPS department is responsible for developing, reviewing, approving and complying with formal instructions, procedures, drawings and related material for performing activities affecting the quality or functions of applicable systems, structures, or components at CPS. Requirements established are:

a. Instructions, procedures, or drawings shall include appropriate qualitative and/or quantitative acceptance criteria for determining important activities have been satisfactorily accomplished.

b. Instructions, procedures, or drawings for maintenance, modifications, testing and operation shall contain step-by-step instructions in the degree of detail necessary for a qualified individual to perform the required function or task.

2.2 Each Manager, Director and Supervisor is responsible for determining the need for issuing and revising instructions and procedures related to each organization's scope of activities.

3. RESPONSIBILITIES

3.1 CPS Departments

a. Develop, approve, and employ those instructions, procedures, or drawings necessary to accomplish its assigned tasks and responsibilities at CPS. Each department is responsible for developing, obtaining approvals, and complying with instructions, procedures or drawings related to its scope of effort.

1. SCOPE

The purpose of this chapter is to define the requirements and responsibilities for review, approval, issue and distribution of controlled documents such as instructions, procedures or drawings and changes thereto.

2. REQUIREMENTS

2.1 Controlled documents such as specifications, procedures, instructions, drawings, computer software for safety-related applications, and other related materials which prescribe activities affecting quality or safety-related functions of systems, structures or components at CPS shall be processed in accordance with the following criteria:

a. Documents, including changes, are reviewed for adequacy by appropriately qualified personnel, approved for issue and use by authorized personnel, and distributed to and used where the prescribed activity is performed.

b. The review and approval of changes **that** modify the intent of the document is performed by the same organizations that performed the original review and approval, unless other equivalent organizations are specifically designated. Reviewing organizations will have access to pertinent background information upon which to base approval and have adequate understanding of the requirements and intent of the original document.

c. The document control system ensures that personnel or organizations are provided with current and approved documents.

d. Documents and changes thereto are controlled by procedures to preclude the use of outdated or inappropriate documents.

e. The CPS document control program provides for periodic reviews of plant procedures to determine if changes are necessary or desirable.

f. Individuals or organizations responsible for preparing, reviewing, approving and issuing documents and changes thereto are identified.

g. The proper documents to be used in an activity are identified.

h. Current distribution lists are established and used.

2.2 Documents such as parts lists, vendor manuals and written correspondence used in the design, operation, and maintenance or testing, are controlled in accordance with departmental procedures **that** include the following:

a. A method of verifying and documenting receipt of transmitted documents.

b. A program for reviewing and approving the documents received for use in activities associated with CPS by that organization.

c. A program for distribution and control.

2.3 Measures are established within each organization to assure obsolete or superseded documents described in the paragraph above are replaced in a timely manner by updated document revisions.

3. RESPONSIBILITIES

3.1 CPS Departments

a. Review, approve and maintain controlled documents generated in accordance with site governing procedures.

b. Employ appropriate measures to receive, record and re-distribute controlled documents from other organizations.

3.2 **Site** Engineering

a. Maintain a Document Control Program to control the issuance of documents, such as instructions, procedures and drawings, including changes thereto, which prescribe all activities affecting quality.

1. SCOPE

The purpose of this chapter is to define the requirements and responsibilities for programs that assure purchased material, equipment, and services conform to procurement requirements.

2. REQUIREMENTS

2.1 Measures have been established to provide assurance that purchased material, equipment, and services conform to procurement document requirements. This assurance is accomplished by controlling both the selection of procurement sources and acceptance of the product at the source and/or upon receipt at CPS.

2.2 CPS procurement procedures require a review of material, equipment and services requisitions for safety-related structures, systems, and components. This review will identify the applicable codes, standards, technical and quality requirements to assure they are equivalent to the original requirements. When alternate requirements are imposed which are not equivalent to the original requirements, the alternate requirements will be fully evaluated and documented. The necessary reviews and evaluations of the procurement source's capability to meet the technical requirements of the procurement documents will also be performed.

2.3 Reviews and evaluations are performed of the procurement source's quality assurance program and ability to meet the quality assurance and technical requirements of the procurement documents. Where necessary, a supplier's acceptability is determined by an audit of the supplier's quality assurance program. Such audits are performed in accordance with a written plan or checklist to determine the ability of the supplier to comply with the quality assurance program requirements of the procurement document. The determination of a supplier's acceptability may be made by means other than by audits. These means may include: a) review and evaluation of the supplier's quality assurance program description document, b) review and evaluation of historical supplier quality performance data, c) supplier facility surveys, d) review and evaluation of audits, surveys, and inspections conducted by other utilities, or American Society Mechanical Engineers (ASME), or e) documented information from organizations, including architect-engineer, Nuclear Steam Systems Supplier, and other utilities that indicate the supplier has a program that meets applicable requirements of Appendix B to 10CFR50. When these means are either not available or do not permit a complete evaluation of a supplier's quality capabilities, a survey or an audit will be conducted of the supplier. A Qualified Suppliers List is maintained.

2.4 In addition to reviewing a supplier's capability to meet the commercial requirements of the procurement documents, a review is performed to ensure the required technical and quality assurance evaluations have been completed satisfactorily prior to contract award or release of the purchase order. The results of these reviews and evaluations are documented.

2.5 When required by the procurement document or specification, surveillances and evaluations at the supplier's facility are conducted to verify continued compliance with the quality assurance requirements of the procurement documents. Qualified individuals accomplish source inspections at the supplier's facility or qualified agents to verify the procurement item or service is being supplied in accordance with the requirements of the procurement documents. Such inspections are accomplished in accordance with written

procedures, plans, and/or checklists containing or referencing appropriate acceptance criteria.

2.6 Upon receipt at CPS, safety-related materials, parts, and components are controlled. Qualified personnel are responsible for inspecting, releasing, and maintaining the inspection status of purchased material and equipment.

2.7 Acceptance activities such as evaluation of content of technical documents required by the purchase order, and the conduct of special tests and measurements which are identified in the purchase order are also performed. Receipt inspections are accomplished in accordance with written procedures and/or plans containing or referencing appropriate acceptance criteria. After receipt inspection, the purchased material is forwarded to a controlled storage area or released for installation or further work.

2.8 Documentary evidence of conformance to procurement requirements provided by the supplier in accordance with the procurement documents is reviewed during source and/or receipt inspections to verify compliance. The validity of a supplier's certificate of conformance is ascertained through any of the following methods: source inspection, independent inspection agency, receipt inspections, surveillance, testing of hardware, quality assurance audits or surveillances. Inspection and test activities verify that the hardware performs in accordance with applicable technical requirements and serve to demonstrate the hardware meets the requirements stated in a certificate of conformance. The results of the source and/or receipt inspections, the acceptability of supplier furnished documentation, and the resulting determination of conformance or nonconformance are documented.

2.9 Acceptance of contracted services such as inspection services, consultant services, installation, repair or maintenance services shall be based on one or all of the following methods, as required:

a. technical verifications

b. surveillance/inspections

c. review of objective evidence such as certifications or technical reports.

3. RESPONSIBILITIES

3.1 CPS Departments

a. Ensure the control of purchased material, equipment, and services conform to procurement requirements.

b. Ensure suppliers performing work at CPS utilize control measures compatible with those of CPS programs.

3.2 **Site Engineering**

a. Review and approve supplier furnished technical data specified by the procurement document, including such items or services as process and test procedures, performance of test data, and heat treat charts prior to acceptance.

3.3. Work Management

a. Review purchase requisitions and specify the technical and quality requirements for the item(s) or service(s) to be procured.

b. Implement procedures for receiving, storing, and issuing purchased items.

c. Ensure qualified inspectors perform required receipt inspection of materials or equipment prior to issuing the material or equipment for operation.

d. Perform reviews of suppliers' capabilities to meet commercial terms and conditions prior to release of the purchase order or contract.

e. Verify the suppliers are listed on the Qualified Suppliers List as required.

3.4 Regional Operating Group Supply Management

a. Perform source surveillances and audits of suppliers' quality assurance programs, or establish alternate controls, prior to release of the initial purchase order or award of contract.

b. Perform source surveillances and audits at suppliers' facilities to verify compliance with the quality and technical requirements of procurement documents.

c. Maintain a database identifying qualified suppliers.

1. SCOPE

The purpose of this chapter is to define the requirements and responsibilities for a program of identification and control of materials, parts, and components such that traceability is assured and the use of incorrect or defective items is prevented.

2. REQUIREMENTS

2.1 Measures have been established which provide for the identification and control of materials, parts, and components to assure that traceability is provided and the use of incorrect or defective items is prevented. These measures include the following:

a. Procurement documents specify appropriate identification to be applied to purchased items.

b. An inventory control system is employed for the receipt, storage or stocking, and issue of materials, parts, and components.

c. The identity of materials, parts, and components is either on the items or on records traceable to them. When physical marking is employed, the marking is clear, unambiguous, indelible, and applied in such a manner as to not be detrimental to the intended function of the item.

d. Markings are not obliterated or hidden by treatment or coatings unless other means of identification are substituted.

e. When codes, standards, or specifications require traceability of materials, parts, or components to specific inspection or test records, the program is designed to provide such traceability.

f. When employed, identification is transferred to each part of an item prior to its being subdivided.

2.2 Materials, parts, and components shall have appropriate identifying designation (such as serial number, part number, heat number, etc.) in order to provide traceability to each item to inspection and test records and/or reports. Where physical identification of an item is either impractical or insufficient, physical separation or additional procedural controls are employed.

2.3 When installed material or equipment is removed for maintenance, repair, or modification, control measures are implemented to ensure proper identification and traceability is maintained. During fabrication, assembly, installation, and shipping activities at a supplier's facility, the supplier conducts verification inspections and is responsible for identification and control of materials, parts, and components in accordance with the requirements of the CPS purchase order.

2.4 Material, parts, and components are identified and controlled during receipt and storage, fabrication, maintenance and modification activities performed at CPS.

3. RESPONSIBILITIES

3.1 CPS Departments

a. Departments responsible for supplier work at CPS are responsible for ensuring identification and control of materials, parts, and components by the supplier are in accordance with applicable procedures.

3.2 Maintenance

a. Implement a program that provides for the identification and control of materials, parts and components used at CPS.

3.3. Work Management

a. Implement an inventory control system for the identification and control of materials, parts, and components.

1. SCOPE

The purpose of this chapter is to define the requirements and responsibilities for assuring special processes such as welding, heat treating, chemical cleaning, nondestructive examination (NDE), pipe bending, and special coatings are performed under proper controls and that qualified procedures governing these processes are established in accordance with applicable codes and specifications, are implemented by qualified personnel, and results of special processes are properly documented and evaluated.

2. REQUIREMENTS

2.1 For some processes, the required level of quality defined in codes, standards, and specifications cannot be verified by inspection of the item only. For these processes, quality assurance is accomplished by qualified personnel using qualified procedures. Processes which meet the following criteria are controlled as special processes:

a. The process is highly dependent upon operator skill and/or process control.

b. The specified quality cannot be readily determined by direct inspection or test of the final product.

2.2 Special process procedures shall specify: prerequisite conditions, processing steps, conditions to be maintained during the steps of the process, inspection and test requirements, personnel qualification requirements and record requirements. Technical portions of the special process controls are delineated or referenced in the design or technical documents by the organization preparing the document.

2.3 Special process procedures shall be reviewed and approved to assure technical adequacy. Supplier process control procedures specify the methods of verifying the adequacy of processing materials, solutions, and equipment, including definitions of their associated control parameters. The control and approval of sub-supplier special process procedures are the responsibility of the specific suppliers involved. Special process requirements are promulgated to suppliers by the procurement and/or design documents.

2.4 Control measures and requirements that have been established include:

a. The need for special processes and the codes or standards applicable are identified during design or preparation of technical documents associated with an activity.

b. Special processes are performed in accordance with approved written procedures applicable to the specific process and qualified in accordance with applicable codes and standards.

c. Personnel performing special processes are qualified, as required in accordance with applicable codes and standards.

d. Special processes are accomplished under suitable controlled conditions which include the use of qualified equipment, adequate control of the environment, and establishment of proper prerequisites related to the process.

e. Application of special process procedures and personnel qualifications is verified through audits and surveillances.

f. Records which show that special processes were performed in compliance with qualified or approved procedures and by qualified personnel and equipment are maintained.

2.5 Inspections are conducted of special processes to ensure compliance with appropriate codes, standards, specifications, procedures, and the CPS Quality Assurance Manual.

3. RESPONSIBILITIES

3.1 Maintenance

a. Maintain a program to qualify special process procedures and equipment.

b. Maintain a program to qualify personnel to perform special processes.

c. Incorporate into CPS documents the requirement for special processes and their controls and references to the applicable codes or standards.

3.2 Work Management

a. Incorporate into CPS documents the requirement for special processes and their controls and references to the applicable codes or standards.

b. Specify special processes in procurement requisitions.

3.3 **Site Engineering**

a. Specify special processes in technical documents.

b. Support CPS in the preparation, revision and qualification of special process procedures and personnel.

c. Review and approve special process procedures used at CPS or specified in procurement documents to verify technical adequacy.

d. Review and approve special process, personnel qualification procedures and verify technical adequacy.

e. Contracts with an Authorized Inspection Agency to provide inspection services for ISI.

f. Perform scheduled ISI examinations and inspections.

g. Contracts with a supplier to perform scheduled ISI examinations and inspections as required.

h. Review NDE procedures, including those of suppliers.

i. Maintain a program to qualify procedures, equipment, and personnel for NDE.

j. Perform NDE to support plant operations, including NDE for repairs, replacements and modifications.

k. Contracts with a supplier to perform NDE or inspection services as required.

1. SCOPE

The purpose of this chapter is to define the requirements and responsibilities for a program of inspection which provides assurance the fabrication, installation, modification, and repair activities affecting safety-related components, systems, and structures conform to the applicable specifications, instructions, procedures, drawings, or other pertinent technical requirements. Independent inspections are not intended to diminish the responsibility of personnel performing the activities for the quality of the work.

2. REQUIREMENTS

2.1 In order to assure safe and reliable operation, programs of inspections are established at CPS which include the following provisions:

a. The requirements for inspections are identified and documented based on procedures, instructions, drawings, and other documents for an activity prior to the start of the activity.

b. Inspections are accomplished in accordance with a combination of approved procedures and instructions which contain or reference, as a minimum:

1. A description of the required inspection (type, method, etc.), the responsibility for performing the inspection, and, where applicable, any sampling plan to be used. Hold/Witness points, where required, shall be indicated in the appropriate documents;

2. The discrete identity of the activity, process, or item to be inspected;

3. Applicable documents, drawings, and specifications pertaining to the activity or item under inspection;

4. Verification of proper type, range, and accuracy of inspection instrument(s) used for each operation;

5. Appropriate quantitative or qualitative criteria for acceptance/rejection;

6. Provisions for recording inspection data and results.

c. Inspection personnel are qualified and certified in accordance with the requirements of applicable codes, standards and procedures. Inspections are performed by persons other than those who performed or directly supervised the activity being inspected. The qualifications and certification of inspection personnel are maintained current.

d. Where inspection or testing is impossible or disadvantageous, indirect control by monitoring process methods, equipment, or personnel is employed. When necessary to provide an adequate level of product quality assurance, both direct control (inspection and testing) and indirect control (process monitoring) are utilized. When sampling plans are used, their applicability is evaluated and justified in writing.

e. Measuring and test equipment used to obtain quantitative data for acceptance criteria shall have an accuracy equal to, or greater than, the required tolerances of the measurement being taken.

3. RESPONSIBILITIES

3.1 Maintenance

a. Implement a program that provides for inspection of work operations performed at CPS.

3.2 **Site Engineering**

a. Specify inspection and nondestructive examination criteria and requirements in technical documents and procurement requisitions.

b. Implement an inspection program for scheduled ISI Program examinations and inspections and perform NDE and inspections to support plant operations.

c. Maintain qualified and certified inspection personnel in accordance with appropriate standards.

3.3 Nuclear Oversight

a. Implement an inspection program for CPS.

b. Maintain qualified and certified inspection personnel in accordance with appropriate standards.

3.4 Work Management

a. Implement a receipt inspection program for CPS.

b. Maintain qualified and certified inspection personnel in accordance with appropriate standards.

c. Specify inspection and nondestructive examination criteria and requirements in procurement requisitions.

1. SCOPE

The purpose of this chapter is to define the requirements and responsibilities for the control of a test program which will assure the safety-related structures, systems or components being tested meet specified performance criteria.

2. REQUIREMENTS

2.1 Measures have been established to address requirements and responsibilities for establishing and conducting test programs for the following:

a. Verification tests prior to installation.

b. Surveillance testing.

c. Tests associated with plant maintenance, modifications, repairs or procedural changes.

2.2 Test programs are developed to assure the required tests are performed in accordance with approved procedures which incorporate or reference the design requirements and acceptance criteria and provide for the following, as required:

a. Statement of test objective(s);

b. Test prerequisites, to be fulfilled prior to the test, including requirements for calibrated instruments, suitable environmental conditions, appropriate equipment and personnel availability; and condition of the item to be tested and condition of the test equipment;

c. Precautions to be taken in the preparation and performance of the test, including limits of parameters if variations outside the normal ranges are prescribed;

d. Mandatory inspection hold points for witness by inspection personnel;

e. Instructions for performance of the test, including the use of appropriate instruments, equipment and personnel;

f. Data to be acquired; and

g. Acceptance/rejection criteria.

2.3 Test schedules are provided and maintained in order to assure that necessary testing is performed and properly evaluated on a timely basis and the safety of the plant is dependent on performance of systems which have satisfactorily passed required tests. Testing is conducted by appropriately trained and qualified personnel. Test results are documented to facilitate evaluation and to provide a permanent record. Test evaluations are performed to assure that performance characteristics conform to design. Repair, rework and/or retesting are scheduled for accomplishment as identified by the test evaluation.

3. RESPONSIBILITIES

3.1 Site Engineering

a. Implement programs that specify and control the testing of structures, components and systems.

b. Develop and implement test schedules to ensure tests are performed on a timely basis.

c. Ensure test personnel are qualified and trained to perform their function.

d. Review and approve test procedures and results for surveillance testing.

e. Review and approve post-maintenance test results.

f. Establish test requirements and acceptance criteria for post-modification testing.

g. Review and approve post-modification and/or special test results.

h. Review and evaluate test results as required by the ISI Program.

3.2 CPS Plant Staff / Maintenance

a. Implement programs for the performance of surveillance and post-maintenance testing.

b. Ensure qualified personnel with appropriate procedural guidance perform post-maintenance testing and surveillance tests.

c. Review and approve test procedures and results for surveillance testing.

d. Review and approve post-maintenance test results.

1. SCOPE

The purpose of this chapter is to define the measures and responsibilities to assure tools, gauges, instruments, and other Measuring and Testing Equipment (M&TE) used in activities affecting quality are properly controlled, calibrated and adjusted at specified periods to maintain accuracy within specified limits. Measures shall also be defined for the control of permanently installed instrument and control devices.

2. REQUIREMENTS

2.1 M&TE is equipment used to quantitatively generate or measure physical parameters with a known degree of accuracy for the purpose of calibration, inspection, test, or repair of plant mechanical, electrical or instrument/control equipment.

2.2 In order to assure the accuracy of measuring and test equipment and installed instrument and control devices which require calibration or calibration check is maintained within specified limits, a written program for the control and calibration of such devices is provided. This program includes the following provisions:

a. For M&TE, the reference standards have an accuracy of at least four (4) times the required accuracy of the equipment being calibrated, or when this is not possible, have an accuracy that assures the equipment being calibrated will be within the required tolerance and the basis of acceptance is documented and authorized by supervision.

b. The reference standards used for calibrations are required to be traceable to nationally recognized standards or accepted values of natural physical constants to the extent possible. When this is not possible, the basis for calibration of a reference standard is required to be documented.

c. Calibration intervals for M&TE and installed instrument and control devices are based upon the type of equipment, stability, reliability characteristics, required accuracy and other conditions affecting calibration.

d. Calibrations are performed by comparison with valid standards using approved written procedures.

e. Calibration standards are maintained and used in a controlled environment which does not adversely affect the calibration procedure or standard.

f. The calibration status, including the due date of next calibration of each item of M&TE, is visible through use of tags, labels or decals attached to the equipment or a statusing system.

g. M&TE and installed instrument and control devices requiring calibration are assigned identification numbers traceable to the calibration records which includes the calibration "AS FOUND" and "AS LEFT" data for the equipment calibrated at the plant. If the equipment is calibrated by an outside service organization, a certificate of calibration complete with "AS FOUND" and "AS LEFT" calibration data is required. Such certificates and data sheets bear the assigned equipment identification numbers and the identification of the calibration standard used and are traceable to the individual calibration records.

h. M&TE is not used past the expiration of the calibration period.

i. If selected installed instrument and control devices are found to be out of calibration, an evaluation concerning the validity of previous inspection and test results is performed and documented. If M&TE is found to be out of calibration, an evaluation concerning the validity of previous inspection and test results and the acceptability of items previously inspected or tested since the time of the last calibration check is made and documented. Corrective action is taken in accordance with Chapter 16 when such evaluations invalidate a previous acceptance.

j. A calibration tracking system is established to ensure re-calibration is performed in accordance with pre-established calibration frequencies.

2.3 A program has been implemented for the control of M&TE and installed instrument and control devices used in operation, maintenance, test and/or inspection activities which fall within the scope of the CPS Quality Assurance Program. Suppliers performing services or providing products to CPS are required to have comparable control programs in effect for items affecting systems, structures and components within the scope of the QA program.

3. RESPONSIBILITIES

3.1 Maintenance

a. Implement programs to control M&TE use at CPS.

b. Implement programs to calibrate and recall the M&TE used at CPS.

3.2 CPS Plant Staff

a. Implement programs to control the use of installed instrument and control devices.

3.3 All CPS Personnel

a. Ensure the appropriate requirements for the control of M&TE are included in technical documents and procurement requisitions.

1. SCOPE

The purpose of this chapter is to define the requirements and responsibilities for the control of handling, storage, shipping, packaging, cleaning and preservation of materials and equipment to prevent damage or deterioration.

2. REQUIREMENTS

2.1 The CPS Quality Assurance Program includes handling, preservation, storage, cleaning, packaging and shipping requirements that are accomplished by trained individuals in accordance with procedures to prevent damage or deterioration. The procedures provide for the control of heavy loads and safe load paths to protect safety systems and radioactive material from damage. In addition to the handling, storage and shipping requirements imposed on suppliers by CPS through appropriate technical and procurement documents, suppliers may also be required to provide information to Work Management related to the proper handling, storage and shipping of furnished materials,parts and components. Work Management uses this information for the development of the storage and handling procedures and instructions to be applied to an item.

2.2 The procedures provide for the preservation of special items that are subject to deterioration or damage through exposure to air, moisture, temperature, or other environments and use of special handling tools and equipment.

2.3 Consumable materials such as chemicals, reagents and lubricants maintained in storerooms and warehouses are controlled procedurally by an inventory control system which includes provisions for identifying storage requirements by commodity and identifying shelf life by commodity, when applicable. Disposal of commodities whose shelf life has expired is addressed and controlled by procedures.

3. RESPONSIBILITIES

3.1 Maintenance

a. Implement programs to provide for the use of special handling tools and equipment.

b. Implement programs to control the handling of materials.

3.2 **Site Engineering**

a. Ensure appropriate handling, storage and shipping requirements are identified in technical documents that are prepared or reviewed by the department.

3.3 Work Management

a. Specify in procurement documents, including requisitions, that suppliers furnishing materials and equipment within the scope of this program implement appropriate controls for handling, shipping and storage of such items.

b. Ensure suppliers furnish the required information relating to the proper handling, storage and shipping of procured items.

c. Implement programs to control the handling, storage and shipping of items to be used in CPS, including radioactive materials.

d. Implement programs to provide for the preservation of items in storage that are subject to deterioration or damage through exposure to harsh environmental elements or conditions.

1. SCOPE

The purpose of this chapter is to define the requirements and responsibilities for identifying the inspection, test and operating status of materials, parts, components and assemblies to assure only items which have passed the required inspections and tests are installed or operated.

2. REQUIREMENTS

2.1 The CPS Quality Assurance Program includes procedures which assure the inspection, test and operating status of materials, parts and components are identified during the receiving, installation and operating processes. These procedures provide for:

a. Clear indication of the status of inspection and tests performed upon individual items by the use of markings such as: a) stamps applied directly to the item, tags, or labels attached to the item; b) routing cards that accompany the item; or c) identification numbers which are traceable to records of the status of inspections and tests. If control stamps are used, a record of the assignment of the control stamp is maintained; however, if a stamp is lost or if the stamp holder no longer requires the stamp, that stamp number is retired. When impression stamping is used, it conforms to the requirements of codes and applicable specifications and standards. When markings are applied directly to items, consideration is given to ensure the markings have no deleterious effect on the items.

b. Assurance that required inspections or tests are not inadvertently bypassed. In cases where required documented evidence is not available, the associated equipment or materials must be considered nonconforming in accordance with Chapter 15 of the CPS Quality Assurance Manual. Until suitable documented evidence is available to show the equipment or material is in conformance, affected systems shall be considered inoperable and reliance shall not be placed on such systems to fulfill their intended safety functions.

c. Clear indication, by the use of a tag and/or statusing system, of the operational status of structures, systems and components when in any status other than a normal operable status to prevent inadvertent operation.

2.2 The test and operating status of materials, parts, components and assemblies is indicated at CPS. The inspection and test status of items in storage is also maintained. Inspection personnel are responsible for the identification of the inspection status on materials, parts and components. As imposed by the contract documents, suppliers performing activities at CPS or furnishing materials, parts, components or assemblies for use at CPS also have responsibilities for the identification of inspection, test and operating status of items under their control. The programs of suppliers performing work at CPS are reviewed and approved to ensure compatibility with the CPS status indication system.

3. RESPONSIBILITIES

3.1 CPS Plant Staff

a. Implement programs to indicate inspection, test and operating status of materials, parts, components, sub-systems and systems during installation, modification, repair, testing and operation of CPS.

b. Implement procedures to control the status of radiological samples.

c. Implement programs to indicate status of nonconforming items.

3.2 Work Management

a. Implement procedures to control the inspection and test status of items in storage.

3.3 Maintenance

a. Implement programs to indicate inspection, test and operating status of materials, parts, components, sub-systems and systems during installation, modification, repair, testing and operation of CPS.

3.4 CPS Departments

a. Review and approve the programs of suppliers performing work at CPS to ensure compatibility with the CPS status indication system.

1. SCOPE

The purpose of this chapter is to describe the measures established and implemented to control items, services or activities which do not conform to the requirements, and the measures to control further processing, to prevent inadvertent use or installation of nonconforming or defective items.

2. REQUIREMENTS

2.1 The following measures have been established and implemented at CPS:

a. Control of nonconformances is accomplished in accordance with documented procedures.

b. Nonconformances are documented by means which also ensure that affected organizations are notified.

c. Nonconforming items are identified and controlled. Except for installed items, nonconforming items are placed in a segregated storage area when practical. Such storage areas are identified as containing only nonconforming items. When segregation is impossible or impractical, the nonconforming item shall be identified and controlled by tagging, marking or documentation traceable to the item, including normally installed items or those removed from the normally installed location.

d. Further use or installation of nonconforming items is controlled in accordance with written procedures and/or instructions.

e. The responsibility and authority for the disposition of nonconformances is defined.

f. Permissible dispositions are: a) "use as is", b) "rework" to drawing or specification requirements, c) "repair" to an acceptable level, d) "reject" for that particular use, or e) "Miscellaneous Evaluation" (other) may be used for non-hardware nonconformances.

g. "Repair" and "rework" dispositions are implemented into the affected item in accordance with documented procedures and/or instructions.

h. The disposition, along with its engineering analysis and any resultant re-inspection and/or acceptance verification, is documented.

i. "Rework" and "repair" actions are described, depending on complexity, by individual procedures or by instructions contained in the corresponding work control document. Each procedure or instruction details required inspections and tests. Specified inspections and tests are equivalent to original requirements. Acceptable alternatives to original inspection or test requirements may be used provided they are assessed for adequacy and the rationale documented.

2.2 In service items that are found to be nonconforming shall be reviewed to determine equipment operability as defined by the Technical Specifications. For items that represent significant conditions adverse to quality or safety, or require a repair or use-as-is disposition, an engineering evaluation shall be performed. The engineering evaluation shall provide support for the initial operability decision and provide the correction or resolution for the identified nonconformances. These items shall be controlled in accordance with approved procedures.

2.3 Installed items not in service that are nonconforming or become nonconforming as a result of maintenance shall be corrected or resolved prior to operational reliance. These items shall be controlled in accordance with approved procedures.

2.4 A nonconforming item may be conditionally released for fabrication, installation or testing following an engineering evaluation to determine if such a conditional release is not detrimental to other components or systems. Conditional released items are controlled in accordance with approved procedures. The nonconformance for the conditionally released item shall be corrected or resolved prior to operational reliance.

2.5 The Plant Manager has the authority to conditionally release any item or installation for operation if needed to place the plant in a safe and stable condition.

3. RESPONSIBILITIES

3.1 All CPS Personnel

a. All CPS personnel are responsible for identifying and reporting nonconforming materials, parts, components, services and activities.

3.2 CPS Departments

a. All CPS Departments are responsible for establishing and implementing effective procedure(s) for identifying, documenting and controlling nonconformances within the scope of their department's activities.

b. Coordinate with Engineering to evaluate and document the safety significance of nonconforming items.

3.3 Maintenance

a. Develop and implement procedures, instructions or work control documents for the control and correction of nonconforming items with repair or rework dispositions.

3.4 Work Management

a. Implement an effective program for processing supplier nonconformance reports.

b. Perform engineering evaluations and authorize the conditional release of items.

c. Implement a program for nonconforming items that ensures "use-as-is" or "repair" dispositions are approved by the appropriate design organization.

d. Determine acceptable alternatives to original inspection or test requirements for "rework" or "repair" dispositions.

e. Document engineering analyses that support the disposition of nonconforming items.

3.5 **Site Engineering**

a. Implement a program for nonconforming items that ensures "use-as-is" or "repair" dispositions are approved by the appropriate design organization.

b. Coordinate with Plant Staff to evaluate and document the safety significance of nonconforming items.

c. Determine acceptable alternatives to original inspection or test requirements for "rework" or "repair" dispositions.

d. Document engineering analyses that support the disposition of nonconforming items.

3.6 Plant Operations Review Committee

a. Review documented safety evaluations for conditionally released items in accordance with the requirements of 10CFR50.59.

1. SCOPE

This Chapter describes the Company program to identify and correct conditions adverse to quality.

2. REQUIREMENTS

2.1 General

The Company implements a Corrective Action Program to promptly identify and correct items or occurrences that are adverse to quality or might adversely affect the safe operation of a nuclear generating station. These items or occurrences are screened for reportability, operability, Part 21, etc. The Company makes a thorough investigation of occurrences and identifies corrective action to prevent recurrence of an event. Events may include reactor trips, failed equipment, personnel errors, and procedural infractions. Measures are taken to assure that the cause of any significant condition adverse to quality is determined and takes corrective action to prevent recurrence.

2.2 Conditions Adverse to Quality

Measures are established to assure that conditions adverse to quality are identified and corrected. Conditions adverse to quality are defined in procedures. Examples are failures, malfunctions, deficiencies (including programmatic), deviations, defective material, design errors, equipment, and nonconformance to specified requirements.

An independent review body reviews violations, deviations and reportable events that require a report to the NRC (in writing) within 24 hours. This includes the review of results of any investigations made and the recommendations resulting from such investigations. These include items such as:

- events, as defined in the plant technical specifications.
- significant operating abnormalities or deviations from normal or expected performance of plant safety-related structures, systems, or components.
- violations of applicable codes, regulations, orders, technical specifications, license requirements or internal procedures or instructions having safety significance.

2.2.1 Significant Conditions Adverse to Quality

In cases of significant conditions adverse to quality the cause of the condition is determined and documented, resolution determined and documented, and corrective action taken and documented to preclude recurrence.

2.2.1.1 Procurement

The Company uses procedures for the procurement process that include methods for the identification of conditions adverse to quality and for timely corrective action. The Company requires individual vendors and their contractors to include corrective action measures in their quality assurance programs. In cases of significant conditions adverse to quality that arise during the procurement process, the Company uses procedures to describe the method used to:

- identify and document deviations and non-conformances.
- review and evaluate the conditions to determine the cause, extent and measures needed to correct and prevent recurrence.
- report the conditions and corrective action to the appropriate levels of management.
- implement and maintain required corrective action.

2.2.1.2 Plant Hardware Malfunctions

The causes of malfunctions are determined, evaluated, and recorded. Experience with the malfunctioning equipment and similar components are reviewed and evaluated to determine if a replacement component of the same type can be expected to perform the function reliably. If evidence indicates that common components in safety-related systems have performed unsatisfactorily, corrective measures are planned prior to replacement or repair of all such components. Appropriate procedures are revised in a timely manner to prevent recurrence of equipment malfunction or abnormal operation.

2.2.1.3 Incorrect Design

When a significant design change is necessary because of an incorrect design, the Company reviews and modifies the design process and verification procedures. In cases of significant or recurring deficiencies (or errors), the Company follows written procedures to correct the deficiency (or error), determine the cause and make changes in the design process and the QAP to prevent similar types of deficiencies (or errors) from recurring.

2.3 Verification and Follow-up

The Company verifies completion of corrective actions for maintenance, repair, refueling, operation activities, completion of corrective action taken for assessment deficiencies (including programmatic), and performs assessments of site corrective action. The Company tracks and verifies completion of corrective action taken for independent assessment findings and approves the completion of corrective actions.

Trending and assessment results are evaluated to assure that corrective measures are implemented effectively and that actions to prevent recurrence are effective.

The Company also requires contractors and vendors to follow-up on corrective action commitments within their quality programs.

The Company regularly reviews and analyzes records to:

- assure that the causes of a nonconformance and the corrective action have been clearly described.
- assure that authorized Company personnel have evaluated the overall effect resulting from the use of nonconforming items.
- determine whether corrective measures will preclude recurrence.

2.4 Evaluation and Qualification

Personnel performing the evaluation function are responsible for considering the cause and the feasibility of corrective action to assure that the necessary quality of anitem is not deteriorated.

Where it is determined that the cause cannot be corrected immediately, the effective date of corrective action will be determined during the review and evaluation. Evaluation may indicate the need for investigations to assure that corrective measures are considered complete and may also indicate that the nature of the deficient condition is minor and does not require corrective action.

Qualified personnel are responsible for determining the root cause(s) of an event and developing recommendations to preclude recurrence. These personnel report the results of their determination to appropriate station personnel and Company management.

2.5 Documentation and Reporting

The Company documents the identification of significant conditions adverse to quality, the cause of the condition, the corrective action taken, and reports these items to the appropriate levels of management, PORC, and the NSRB. If the identified issue is not an indication of a significant failure in any portion of the QAP, the Company does not require reporting to management.

Reports are made immediately if prompt corrective action is required. Formal reports are filed with the appropriate regulatory agency, when required. Reports of investigations include a detailed description of the occurrence, the findings of the investigation, and the recommended corrective measures. The Company notifies the rest of the nuclear industry of any significant event and its circumstances to help preclude a similar event occurring at another plant.

The Company keeps records to identify incidents (e.g., major damage, personal injury, major schedule delays.), non-conforming items, unfavorable conditions, programmatic deficiencies identified in assessment reports, significant equipment failures, and malfunctions that occur during station operation.

The Company tracks the completion of corrective actions for significant conditions adverse to quality and maintains records of their resolution. Parts or all of this system may be electronically monitored and electronic records may be used as the sole record of such a system.

3. RESPONSIBILITIES

3.1 CPS Personnel

a. All CPS personnel are responsible for identifying and reporting conditions adverse to plant safety and/or quality.

3.2 CPS Departments

a. Implement a corrective action procedure(s) which assures that conditions adverse to plant safety and/or quality are promptly identified, reported, analyzed for significance and corrected. In the case of significant conditions, the procedure(s) requires an analysis for causes, action to preclude recurrence, and follow-up to verify implementation of corrective action.

3.3. CPS Plant Staff

a. Assess conditions adverse to plant safety for operational impact.

b. Administer a Corrective Action Program (CAP) to assure that conditions adverse to plant safety and/or quality are identified, evaluated, reported, corrected, reviewed, evaluated for effectiveness, and trended.

3.4 Nuclear Safety Review Board

a. Review significant conditions adverse to plant safety in accordance with a documented program.

1. SCOPE

The purpose of this chapter is to define the requirements and responsibilities for collection, compilation, storage and retrieval of records necessary to provide evidence of quality in the design, fabrication, installation, inspection, testing and operating activities related to CPS.

2. REQUIREMENTS

2.1 Measures shall be established to assure sufficient records are identifiable to the item or activity to which they apply. Records shall be filed in an orderly manner and retrievable. Records are maintained in the records storage facilities.

2.2 Test and inspection records shall contain the following information:

a. Identity of the inspector or data recorder;

b. Type of observation;

c. Date and results of the test or inspection (quantitative and qualitative);

d. Acceptability of the test or inspection results; and

e. Action taken and rationale to resolve any problems noted.

2.3 The preparation, collection, review, acceptance, turnover/transfer, processing, transmittal, retention and retrieval of records is accomplished in accordance with documented standards and procedures. Some quality assurance records may be kept by suppliers and maintained on an available basis for a specified period of time. Such records are required to be offered to CPS after the suppliers no longer plan to keep them.

2.4 The retention times for the various quality assurance records are in accordance with applicable requirements including 10CFR, and nationally recognized standards and codes. Records are maintained in the records storage facilities that provides controlled access and protection against fire, flooding, vermin and decay.

3. RESPONSIBILITIES

3.1 CPS Departments

a. Implement site governing procedures for preparation, collection, review, acceptance, turnover/transfer, processing, transmittal, retention and retrieval of records.

b. Transfer completed quality assurance records to the Records Management Group for processing and retention.

3.2 **Site Engineering**

a. Establish, maintain and implement a Records Management Program including procedures covering the preparation, collection, review, turnover/transfer, processing, retention and retrieval of records generated in performing activities within the scope of this program.

b. Receive, process (index, microfilm, etc.), and retain quality assurance records in the records storage facilities.

c. Maintain the CPS records storage facilities such that completed quality assurance records are kept in accordance with the requirements of this manual.

1. SCOPE

A documented, comprehensive system of planned and periodic performance based assessments of the Company and its vendors are conducted to verify QAP compliance, adequacy, and effectiveness. Assessments are conducted in accordance with written procedures and to the requirements of ASME NQA-1 to evaluate the assessed organization and to assure completion of required corrective actions, commitments, or improvements and determine effectiveness in meeting program objectives. For internal assessments, the term "audit" and "assessment" are synonymous.

2. REQUIREMENTS

2.1 Assessments - General

2.1.1 Scheduling

Internal assessments shall be conducted on a performance driven frequency, not to exceed 24 months or at a frequency indicated in Appendix B, "Assessment Frequency," in accordance with the Company QAP and procedures. Planned and comprehensive performance based assessments are conducted to assure that safety related functions are fully evaluated. Internal assessments are performed to a schedule that includes required assessment areas and frequencies. The management position responsible for NOS, or designated staff member(s), approves them. Schedules are reviewed semi-annually and revised accordingly to assure that coverage is maintained current.

2.1.2 Preparation

A documented plan or an agenda identifies the assessment scope, requirements, assessment personnel, activities to be assessed, organizations to be notified, applicable documents, and schedule. An approved checklist or procedure for each scheduled assessment identifies the quality and technical elements of the area or items to be evaluated. Assessment plans, agendas, checklists, and procedures as applicable are prepared in advance under the direction of an ATL.

2.1.3 Personnel

Experienced and qualified personnel perform assessments and are familiar with written procedures, standards, and processes applicable to the area being assessed. Assessment personnel shall have sufficient authority and organizational freedom to make the assessment process meaningful and effective and shall not have direct responsibilities in the areas to be assessed. They shall have access to plant records necessary to fulfill the assessment function.

The ATL shall organize and direct the assessment and ensure the assessment team collectively has the required experience or training for the activities to be assessed. Technical specialists may supplement the assessment team to provide additional experience and competence.

2.1.4 Performance

Performance based assessments are conducted to assess specific activities, processes, and records on the basis of their impact and importance relative to safety, reliability, and functionality. Assessments can be focussed on areas most in need of improvement. Objective evidence shall be examined to the extent necessary to determine that a quality program is being effectively implemented.

Assessments are initiated early to assure effective quality assurance during design, procurement, manufacturing, construction, installation, inspection, testing, and operations. Additional unscheduled assessments may also be performed at various stages of activities, based on the nature and safety significance of the work being done; to verify continued adherence to and effectiveness of the quality systems.

2.1.5 Reporting and Follow-up

An assessment report includes the description of the assessment scope, identification of the assessment team and personnel contacted during assessment activities, a summary of results (including a statement on effectiveness of the QAP elements), and a description of each finding. The ATL shall sign the assessment report for which he or she is responsible.

Assessment results are documented and distributed to the management position of the assessing organization and to the appropriate managerial level of the organization having responsibility for the area or activity assessed. Deficiencies requiring prompt corrective action are reported immediately to the management of the assessed organization.

Recommendations and findings of each assessment shall be reported to appropriate site management and the management position responsible for NOS. All findings of noncompliance with NRC requirements, and any significant nuclear safety or quality issue, requiring escalated action, will be directed through the management position responsible for NOS to the President and CNO.

Responsible management shall take the necessary actions to correct deficiencies identified in the assessment. They will identify the corrective action to be taken, actions that will prevent recurrence, and a schedule for implementing these actions.

Verification of the completion of scheduled corrective action commitments is performed to assure deficiencies or adverse conditions are corrected. Follow-up action of previous deficient areas or adverse conditions (including re-assessment) is taken to verify that corrective action has been completed, is effective, implementation continues, and is properly documented, when indicated.

2.1.6 Records

Assessment results are documented and reports are generated and retained. Associated documentation is on file at the appropriate location. Personnel qualification records for assessment team members are established, maintained, and reviewed.

2.2 Vendor Assessments

Assessments, audits, or surveys of vendors and their sub-tier suppliers are performed to a pre-established schedule. The management position responsible for evaluation of suppliers, and/or the Assessment Team Leader (ATL), shall review and approve the assessment/audit/survey

schedule and checklists, and sign reports. Schedules are reviewed semi-annually and revised accordingly to assure that suppliers are assessed, audited, or surveyed as required.

Assessment program requirements are imposed on suppliers by appropriate contract or procurement documents. The Company's active participation in nuclear industry assessments provides an alternative means to fulfilling its responsibility for examining suppliers activities.

2.3 Independent Management Assessment

A periodic assessment (not to exceed 24 months) of the status and adequacy of the QAP is performed by an independent organization to assure that assessments are being accomplished to program requirements. The management position responsible for NOS submits the results of this assessment to the President and CNO.

3. RESPONSIBILITIES

3.1 CPS Departments

a. Maintain a program for determining and implementing corrective actions to audits.

3.2 Nuclear Safety Review Board

a. Review reports of internal audits for program evaluation.

3.3 Nuclear Oversight

a. Implement an internal audit program and audit each CPS organization performing activities within the scope of the quality assurance program to verify that the requirements of this manual are being met.

b. Coordinate for the Regional Operating Group Director - Nuclear Oversight, the performance of independent audits of the Quality Assurance organization.

c. Implement a program for evaluating the adequacy of corrective actions to audit findings.

d. Independent Safety Engineering Group review reports of internal audits for program evaluation.

3.4 Regional Operating Group Supply Management

a. Implement an external audit program and audit suppliers performing quality related activities to verify compliance with the supplier's respective quality assurance programs, contract, specifications and requirements, as defined on the procurement document.

Acceptance Criteria - Specified limits placed on characteristics of an item, process or service defined in codes, standards or other requirement documents.

Audit - A documented activity performed in accordance with written procedures or checklists to verify, by examination and evaluation of objective evidence, that applicable elements of the quality assurance program have been developed, documented and effectively implemented in accordance with specified requirements. The terms 'Audit' and 'Assessment' as used in this manual are synonymous.

Auditor - Any individual who performs any portion of an audit, including lead auditors, technical specialists, auditors-in-training and others, such as management representatives.

Augmented D - Augmented D is the term applied to those components within the Augmented D boundaries as defined in the engineering specifications. (See K-2882, USAR Table 3.2.1, and Appendix C of this manual for scope of requirements and boundaries pertaining to Augmented D).

Authorized Inspection Agency (AIA) - An agency designated as such by the appropriate legal authority of a State or Municipality of the United States or a Province of Canada or an insurance company authorized to write boiler and pressure vessel insurance in that jurisdiction in accordance with the provisions set forth in ASME N626, per the approved year/Edition.

Authorized Nuclear Inservice Inspector (ANII)/Authorized Nuclear Inspector (ANI) - An authorized Nuclear Inservice Inspector and Authorized Nuclear Inspector is an employee of an Authorized Inspection Agency who meets the requirements of ANSI/ASME N626, per the approved year/Edition.

Certification - The act of determining, verifying and attesting in writing to the qualification of personnel, processes, procedures or items in accordance with specified requirements.

Certificate of Compliance - A written statement signed by a qualified party attesting that the items or services are in accordance with specified requirements and accompanied by additional information to substantiate the statement.

Certificate of Conformance - A written statement signed by a qualified party certifying that items or services comply with specific requirements.

Certified Test Report - A written and signed document approved by a qualified party that contains sufficient data and information to verify the actual properties of items and the actual results of all required tests.

Characteristic - Any property or attribute of an item, process or service that is distinct, describable and measurable, as conforming or nonconforming to specified quality requirements. Quality characteristics are generally identified in specifications and drawings which describe the item, process or service.

Chemical Cleaning - Refers to the use of acids and caustic substances applied to material or product forms during manufacture, maintenance or repair.

Codes - Collective term used to describe all the published codes applicable to CPS operations, such as the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code.

Commercial Grade Classified Items - Items which are: (1) not subject to design or specification requirements unique to NRC licensed facilities or activities; (2) used in applications other than NRC licensed facilities or activities; and (3) able to be ordered from the manufacturer/distributor on the basis of the specifications set forth in manufacturer's published product descriptions.

Condition Adverse to Quality - An all inclusive term used in reference to any of the following: failures, malfunctions, deficiencies, deviations, defective items and nonconformances.

Control Stamp - A stamp used to mark a unique identification of inspection or test status upon items, tags, labels, routing cards or records traceable to an item. Control stamp impressions clearly identify the person who applied it such that traceability to their authorization is provided.

Correction - The process of bringing a nonconforming item into conformity with an approved design, i.e., implementation of a dispositioned nonconformance document.

Corrective Action - The action required to correct or resolve adverse conditions in equipment, material, processes, procedures or activities when noted. Action taken may be remedial action to correct the specific condition, corrective action to preclude recurrence, or both.

CPS - Abbreviation for Clinton Power Station.

Departmental Procedures or Instructions - Procedures or instructions approved and issued within a department which provide detailed direction to personnel.

Deviation - A nonconformance or departure of a characteristic from specified requirements.

Documents - Collective term used to describe all written or pictorial information that directs or shows how an activity is to be accomplished. Documents include, but are not limited to, drawings, procedures, instructions and changes thereto.

Documentation - Any written or pictorial information describing, defining, specifying, reporting or certifying activities, requirements, procedures or results.

Examination - An element of inspection consisting of investigation of materials, components, supplies or services to determine conformance to those specified requirements which can be determined by such investigation. Examination is usually nondestructive and includes simple physical manipulation, gauging and measurement.

Extended Quality Assurance Program - The selected use of technical and management controls to improve the operational performance of equipment important to reliable station operation but not included in compliance based quality assurance programs.

External Audits - Audits of those portions of contractors', vendors' and suppliers' quality assurance program activities not retained under CPS's direct control and not within the CPS organizational structure.

Field Observation - A documented QA activity which is a judgment on, or inference from, an activity or process observed which is used as a mechanism to provide timely feedback to line organizations on performance.

Follow-up - Action involving direct communication with the responsible organization to assure a timely written response to findings, adequacy of the response and corrective action accomplishment as scheduled.

Hold Point - Point in a procedure or work document at which the performer is required to stop and notify inspection personnel to allow for planned inspections. The work activity shall not proceed without the point being signed by inspection personnel, or inspection personnel being notified and authorizing the activity to proceed, or the point waived/reclassified.

Independent Review - Review completed by personnel not having direct responsibility for the work functions under review regardless of whether they operate as a part of an organizational unit or as individual staff members.

Inservice Inspection - A mandatory program of examinations, testing, inspections and control of repairs and replacements to ensure adequate safety in maintaining the nuclear power plant and to return the plant to service in a safe and expeditious manner in accordance with the CPS ISI Program Manual.

Inspection - A phase of quality control which by means of examination, observation or measurement determines the conformance of materials, supplies, components, parts, appurtenances, systems, processes or structures to predetermined quality requirements.

Interface - When two or more organizations have responsibilities for accomplishing an activity, the functional relationship that one organization has to the others in completing the activity is called an "interface" relation. One example of interface is when one organization must perform a step which is a prerequisite to another organization accomplishing its function. Interface can also mean that several organizations accomplishing similar activities are under the coordination control of one organization.

Internal Audits - Audits of those portions of CPS's Quality Assurance program activities retained under direct Company control and within the CPS organizational structure.

Item - Any level of unit assembly, including structure, system, sub-system, subassembly, component, part or material.

.Lead Auditor - An individual qualified and certified to organize and direct an audit, report audit findings and evaluate corrective action.

Measuring and Test Equipment - Equipment used to quantitatively generate or measure physical parameters with a known degree of accuracy for the purpose of calibration, inspection, test or repair of plant mechanical, electrical or instrument/control equipment. (This does include permanently installed instrument and control devices.)

Noncompliance - A failure to comply with a regulatory requirement.

Nonconformance - A deficiency in characteristics, documentation or procedure which renders the quality of an item unacceptable or indeterminate. Examples of nonconformances include physical defects; test failures; incorrect or inadequate documentation; or unauthorized deviations from prescribed processing, inspection or test procedures.

Nuclear Safety Review Board (NSRB) - A committee responsible for the independent safety review function.

Objective Evidence - Any statement of fact, information or record, either quantitative or qualitative, pertaining to the quality of an item or service based on observations, measurements or tests which can be verified.

Operable/Operability - A system, subsystem, train, component or device shall be operable or have operability when it is capable of performing its specified function(s) and when all necessary attendant instrumentation, controls, electrical power, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s). NOTE: Safe operation of the plant is determined by CPS licensed operators.

Permanently Installed Instrument and Control Devices - The installed plant equipment including computer points used in determining acceptance criteria of Technical Specification surveillances (Category A Instruments).

Plant Staff - The organization which is directly responsible for the operation of CPS. The Plant Staff includes operations, refueling, chemistry, radiation protection, radwaste, and corrective action program administration.

Plant Operations Review Committee – An on-site committee whose function is to advise the Plant Manager on matters related to nuclear safety. [Formerly named Facility Review Group (FRG)]

Procedure - A document that specifies or describes how an activity is to be performed. It may include methods to be employed, equipment or materials to be used and sequence of operations.

Procurement Documents - Contractually binding documents that identify and define the requirements which items or services must meet in order to be considered acceptable by the purchaser. Procurement documents include such items as contracts, letters of intent, purchase orders or proposals and their acceptance which authorizes the seller to perform services or supply equipment, materials or facilities on behalf of the purchaser.

Qualification - (Personnel) - The characteristics or abilities gained through training or experience or both that enable an individual to perform a required function.

Quality Assurance - All those planned and systematic actions necessary to provide assurance that a structure, system or component will perform satisfactorily in service.

Quality Assurance Record - Those delineated completed records which furnish documentary evidence of the quality of items and/or activities affecting quality within the scope of the CPS Quality Assurance Program.

Quality Control - Those quality assurance actions which provide a means to control and measure the characteristics of an item, process or facility to established requirements.

Quality Related - Activities which influence quality of safety-related items or work related to those systems, structures and components as identified in the USAR, Table 3.2-1, including design, purchasing, fabricating, handling, shipping, storing, cleaning, preserving, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling or modifying.

Receipt Inspection - An inspection which verifies that items are in satisfactory condition, that they match the purchase order requirements and that required documentation accurately reflects the item(s) received. Visual and physical inspection will be performed as necessary to determine the acceptability of the item(s).

Regulations - Collective term used to describe the governing directives and laws applicable to CPS operation, such as the Code of Federal Regulations.

Repair - The process of restoring a nonconforming characteristic to a condition such that the capability of an item to function reliably and safely is unimpaired, even though that item still may not conform to the original requirement. For ASME Section XI Activities, "REPAIR" is the process of restoring a non-conforming item by welding, brazing or metal removal such that existing design requirements are met.

Resolution - The process by which a nonconforming item is corrected or determined to adequately perform its design function without adversely affecting safety. The resolution may contain controls or limitations that are to apply until the nonconformance is fully corrected.

Rework - The process by which a nonconforming item is made to conform to prior specified requirements by completion, remachining, reassembling or other corrective means.

Safety-Related - Systems, structures and components which are considered important to safety because they perform safety actions required to avoid or mitigate the consequences of abnormal operation transients or accidents. In addition, design requirements are placed upon such equipment to assure the proper performance of safety actions, when required. Safety-related items are those designated Seismic Category 1, Safety Class 1, 2, 3, "Other" and Electrical Class 1E as identified in the USAR, Section 3.2.

Scope - The area covered by a given activity or subject.

Seismic Classification - Plant structures, systems and components important to safety which are designed to withstand the effects of a safe shutdown earthquake (SSE) and remain functional if they are necessary to assure:

a. The integrity of the reactor coolant pressure boundary, or

b. The capability to shutdown the reactor and maintain it in a safe condition, or

c. The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the guideline exposures of 10CFR100.

Plant structures, systems and components, including their foundations and supports, which are designed to remain functional in the event of an SSE are designated as Seismic Category 1 as indicated in Table 3.2-1 of the CPS USAR.

Significant Condition Adverse to Quality and/or Safety - A condition that affects or is likely to have an effect on, or influence, the safe operation of the plant, the capability to shut down the reactor and maintain it in a safe shutdown condition or the capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures.

Source Inspection - An inspection performed at the location of item procurement, supply or manufacture for the purpose of verifying that the item meets specified requirements.

Special Processes - Term used to describe those activities or processes in which the end result or product quality either cannot be readily verified when the process is complete or it is not prudent to delay verification until process completion. The assurance of quality is heavily dependent upon control of the process and the skills of the personnel who perform the process.

Standards - Term used to describe the results of standardization efforts which have been approved by recognized authorities. As used herein, standards refer to either publications describing an acceptable method of implementing or performing an activity or an item of known value used for comparison.

Stop Work - Collective term used to describe the following three levels of stopping work activities:

a. The stopping of a single or specific work activity by Nuclear Oversight personnel.

b. A hold imposed by a Department Head on a department or general work activity.

c. A Stop Work Action initiated by the Manager – Nuclear Oversight

Supplier - Any individual or organization that furnishes items or services to CPS under a procurement document.

Surveillance - A review or observation of an activity, process or product to verify that an action has been or is being accomplished in accordance with applicable requirements and management expectations.

Survey - A documented evaluation of an organization's ability to perform activities as verified by a determination of the adequacy of the organization's quality program and by a review of the implementation of that program at the location of work.

System Safety Classifications - Structures, systems and components are classified as Safety Class 1, Safety Class 2, Safety Class 3, Safety Class Other or Class 1E in accordance with the importance to Nuclear Safety. Equipment is assigned a specific safety class, recognizing that components within a system may be a differing safety importance. Definitions of various Safety Classes are:

Safety Class 1 - Components of the reactor coolant pressure boundary or core support structure whose failure could cause a loss of reactor coolant at a rate in excess of the normal make-up system.

Safety Class 2 - Structures, systems and components, other than service water systems, that are not Safety Class 1, but are necessary to accomplish the safety functions of:

a. Inserting negative reactivity to shut down the reactor,

b. Preventing rapid insertion of positive reactivity,

c. Maintaining core geometry appropriate to all plant process conditions,

d. Providing emergency core cooling,

e. Providing and maintaining containment,

f. Removing residual heat from the reactor and reactor core, or

g. Storing spent fuel.

Safety Class 3 - Structures, systems and components that are not Safety Class 1 or Safety Class 2, but whose function is to process radioactive fluids and whose postulated failure would

result in conservatively calculated offsite doses that exceed 0.5 rem to the whole body or its equivalent to any part of the body in accordance with Regulatory Guide 1.26.

Safety Class "Other" - Structures, systems and components used in the power conversion or other portions of the facility which have no direct safety function, but which may be connected to or influenced by the equipment within the Safety Classes 1, 2 or 3.

Class 1E - The safety classification of the electric equipment and systems that are essential to emergency reactor shutdown, containment isolation, reactor core cooling and containment and reactor heat removal or otherwise are essential in preventing significant release of radioactive material to the environment.

(Structures, systems and component safety classifications and related Quality Assurance Program requirements classifications are summarized in Table 3.2-1 of the USAR.)

Technical Specifications - Appendix A to the Operating License containing the design and performance criteria and operating limits and principles to be observed during critical testing, startup, power operations, refueling and maintenance operations.

Traceability - The ability to identify the origins of a particular item when required by adopted codes or standards.

USAR - Abbreviation for the Updated Safety Analysis Report, which is the document submitted by CPS to the Nuclear Regulatory Commission in accordance with 10CFR50.71.

Use-As-Is - A disposition which may be imposed for a nonconformance when it can be established that the discrepancy will result in no adverse conditions to safety and that the item under consideration will continue to meet all engineering functional requirements including performance, maintainability, fit and safety.

Verification - The act of confirming, substantiating or assuring that an activity or condition has been implemented in conformance with the specified requirements.

Witness Point - Point in a procedure or work document at which the performer is required to stop and notify inspection personnel to allow for planned inspections. Once notification has been accomplished and the agreed to time (or a reasonable amount of time) has passed, the work activity may continue.

Internal assessments shall be conducted on a performance driven frequency, not to exceed 24 months or at the frequencies indicated below, in accordance with the Company's QAP. Assessments shall include the following safety-related functions as applicable:

ASSESSMENT	FREQUENCY
a. The conformance of unit operation to provisions contained within the technical specifications and applicable license conditions.	24 Months
b. The adherence to procedures, training, and qualification of the station staff.	24 Months
c. The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems, components, or method of operation that affect nuclear safety.	24 Months
d. The performance of activities required by the Quality Assurance Program to meet the criteria of Appendix B of 10CFR50.	24 Months
e. The Fire Protection Program and implementing procedures, including an inspection and assessment of the Fire Protection and Loss Prevention Program, shall be performed utilizing an outside qualified fire protection consultant.	24 Months
f. [Letter designator kept as a place holder on to maintain alignment with ROG format.]	24 Months
g. The Radiological Environmental Monitoring Program (REMP) and its results.	24 Months
h. The Offsite Dose Calculation Manual (ODCM) and implementing procedures.	24 Months
i. The Process Control Program (PCP) and implementing procedures for the solidification of radioactive wastes.	24 Months
j. The performance of activities required by the Company QAP effluent and environmental monitoring.	24 Months
k. Randomly selected procedures to ensure that the programmatic control processes used to assure that procedures are technically and administratively correct prior to use are resulting in timely and accurate procedure revisions.	24 Months

l. The Security Plan and implementing procedures. [Ref. 10CFR 50.54 (p)(ii) for lesser frequency requirements]	24 Months
m. The Emergency Plan and implementing procedures. [Ref. 10CFR 50.54(t)(ii) for lesser frequency requirements]	24 Months
n. NSRB activities at a frequency not to exceed 5-years.	60 Months

This appendix details, in matrix form, the chapters of this manual which are applicable in full or in part to:

Fire Protection
Security
Environmental Radwaste/Augmented D Systems
Packaging and Transportation of Radioactive Material

10CFR50, Appendix B requires a quality assurance program be established in writing and executed for activities affecting the safety-related function of designated structures, systems and components to an extent consistent with their importance to safety. Table 3.2-1 in the CPS USAR identifies specifically those structures, systems and components that are important to safety.

Fire Protection, Security, Environmental and Radwaste/Augmented D systems are specifically identified in Table 3.2-1 of the CPS USAR and/or highlighted in several Regulatory Guides that define and clarify their importance to the plant.

Regulatory Guide 1.120, "Fire Protection Guidelines for Nuclear Power Plants", Revision 1 (November 1977) states that, "A quality assurance (QA) program is needed to identify and rectify errors in design, construction and operation (of a fire protection system) and is an essential part of defense in depth." Regulatory Guide 4.15, "Quality Assurance for Radiological Monitoring Programs (Normal Operation - Effluent Streams and the Environment", Revision 1 (February 1979), states that, "The need of quality assurance is implicit in all requirements for effluent and environmental monitoring." Regulatory Guide 1.143, Revision 0 (July 1978) states that, "...to ensure that systems will perform their intended function a quality assurance program sufficient to ensure that all design, construction and testing provisions are met should be established and documented." Regulatory Guide 1.17, "Protection of Nuclear Power Plants Against Industrial Sabotage", Revision 1 (June 1973), requires programmatic controls over the design, construction, testing and operation of the security system at nuclear power plants.

10CFR Part 71, "Packaging and Transportation of Radioactive Material", Section 71.101, "Quality Assurance Requirements", requires that licensees have a quality assurance program that has been submitted to and approved by the NRC as satisfying the provisions of Subpart H of Part 71. Subpart H requires, in part, that licensees' quality assurance programs satisfy each of the applicable criteria specified in Section 71.101 to an extent consistent with their importance to safety. Regulatory Guide 7.10, "Establishing Quality Assurance Programs for Packaging Used in the Transport of Radioactive Material", Annex 2, provides quality assurance programs applicable to Procurement, Use, Maintenance, and Repair of Packaging Used in Transport of Radioactive Material.

The extent to which the CPS Quality Assurance Program applies to each of the four areas varies as defined further under subsequent sections of this appendix. The attached matrix outlines which chapters of this manual apply to Fire Protection, Security, Environmental and Radwaste/Augmented D systems and Packaging and Transportation of Radioactive Material.

MATRIX

Chapters of the Clinton Power Station Quality Assurance Manual applicable to Fire Protection, Security, Environmental, and Radwaste/Augmented D, and Packaging and Transportation of Radioactive Material.

QA MANUAL CHAPTER	FIRE PROTECTION	SECURITY	ENVIRONMENTAL	RADIOACTIVE WASTE/ AUGMENTED D	PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIAL
1	YES	NO	YES	YES	YES
2	YES	NO	YES	YES	YES
3	YES	NO	NO	YES	YES
4	YES	NO	YES	YES	YES
5	YES	NO	YES	YES	YES
6	YES	NO	YES	YES	YES
7	YES	NO	YES	YES	YES
8	NO	NO	YES	NO	YES
9	NO	NO	NO	YES	YES
10	YES	NO	NO	YES	YES
11	YES	NO	YES	YES	YES
12	NO	NO	YES	NO	YES
13	NO	NO	YES	YES	YES
14	YES	NO	YES	YES	YES
15	YES	NO	YES	YES	YES
16	YES	YES	YES	YES	YES
17	YES	YES	YES	YES	YES
18	YES	YES	YES	YES	YES

NOTE: Structures, systems and components subject to the above requirements are described by USAR Table 3.2-1 and further defined by engineering specifications, drawings, procedures, instructions, other documents, etc.

FIRE PROTECTION

Chapter 1 -	Applicable
Chapter 2 -	Applicable
Chapter 3 -	Applicable
Chapter 4 -	Applicable. Specification of quality assurance program requirements for suppliers of fire protection materials, equipment and services shall be on a case-by-case basis. Commercial grade or off-the-shelf items may provide an acceptable level of quality based on the nature of the item. This determination shall be made by Engineering personnel prior to issuance of procurement documents
Chapter 5 -	Applicable
Chapter 6 -	Applicable
Chapter 7 -	Applicable. Suppliers providing material, equipment and services for fire protection shall be subject to source evaluation and surveillance. The extent of imposition of these requirements shall be determined on a case-by-case basis by the design organization responsible for review and approval of the procurement specifications. Measures shall be established, as appropriate, for examination of products upon delivery.
Chapter 8 -	Not Applicable
Chapter 9 -	Not Applicable
Chapter 10 -	Applicable only to inspection of those items and activities affecting the fire protection system within the quality assurance boundaries as specified in the USAR, Table 3.2-1 and further amplified by the appropriate design drawings.
Chapter 11 -	Applicable
Chapter 12 -	Not Applicable
Chapter 13 -	Not Applicable
Chapter 14 -	Applicable
Chapter 15 -	Applicable
Chapter 16 -	Applicable
Chapter 17 -	Applicable to documents designated as Quality Assurance Records generated in the implementation of the Fire Protection program and consistent with the requirements identified in Chapter 10 above. Records are prepared and maintained to furnish evidence that the applicable criteria discussed herein are being met for activities affecting the Fire Protection program.
Chapter 18 -	Applicable. Audits shall be performed and documented to verify compliance with the Fire Protection program, including design and procurement documents, instructions, procedures and drawings and inspection and test activities.

SECURITY

Chapter 1 - Not Applicable

Chapter 2 - Not Applicable

Chapter 3 - Not Applicable

Chapter 4 - Not Applicable

Chapter 5 - Not Applicable

Chapter 6 - Not Applicable

Chapter 7 - Not Applicable

Chapter 8 - Not Applicable

Chapter 9 - Not Applicable

Chapter 10 - Not Applicable

Chapter 11 - Not Applicable

Chapter 12 - Not Applicable

Chapter 13 - Not Applicable

Chapter 14 - Not Applicable

Chapter 15 - Not Applicable

Chapter 16 - Applicable

Chapter 17 - Applicable to those records required by the CPS Physical Security Plan.

Chapter 18 - Applicable to the physical security of CPS and designated records.

ENVIRONMENTAL

Chapter 1 -	Applicable
Chapter 2 -	Applicable
Chapter 3 -	Not Applicable
Chapter 4 -	Applicable to procurement of monitoring services to be performed by contractors providing services dealing with radiological data and to radionuclide reference standards used for calibration of radiation measurement systems.
Chapter 5 -	Applicable to all activities related to carrying out the radiological monitoring program including: sample collection; packaging, shipment and receipt of samples for off-site analysis; procurement, maintenance, storage and use of radioactivity reference standards; calibration and checks of radiation and radioactivity measurement systems; and reduction, evaluation and reporting of data.
Chapter 6 -	Applicable to procedures and instructions required by Chapter 5.
Chapter 7 -	Applicable to radionuclide reference standards used for calibration of radiation measurement systems and to radiological monitoring activities (services) provided by contractors.
Chapter 8 -	Applicable only to radiological sample collection, identification, packaging, shipping, receiving, storage and analysis.
Chapter 9 -	Not Applicable
Chapter 10 -	Not Applicable
Chapter 11 -	Applicable to radioactivity measurements of samples, instrument backgrounds, replicate samples and analytical blanks; data reduction and verification; computer program documentation and verification.
Chapter 12 -	Applicable to laboratory instruments for radiation and radioactivity measurement, continuous radiological effluent monitoring systems and flowrate measuring devices associated with radiological effluent monitoring systems.
Chapter 13 -	Applicable to radiological samples only.
Chapter 14 -	Applicable to continuous radiological effluent monitoring systems equipment only.
Chapter 15 -	Applicable
Chapter 16 -	Applicable
Chapter 17 -	Applicable to personnel training and qualification; field and in-plant collection of samples; continuous effluent monitoring; sample receipt and laboratory identification; sample preparation and radiochemical processing; radioactivity measurements of samples, instrument backgrounds and analytical blanks; data reduction and verification; instrument calibration and calibration standards; computer program documentation; audits; and corrective action.
Chapter 18 -	Applicable

RADIOACTIVE WASTE/AUGMENTED "D"

Chapter 1 - Applicable

Chapter 2 - Applicable

Chapter 3 - Applicable

Chapter 4 - Applicable. Specification of quality assurance program requirements for suppliers of radioactive waste/augmented D materials, equipment and services shall be on a case-by-case basis. Commercial grade or off-the-shelf items may provide an acceptable level of quality based on the nature of the item. This determination shall be made by Engineering personnel prior to issuance of procurement documents.

Chapter 5 - Applicable

Chapter 6 - Applicable

Chapter 7 - Applicable. Suppliers providing material, equipment and services for radioactive waste/augmented D shall be subject to source evaluation and surveillance. The extent of imposition of these requirements shall be determined on a case-by-case basis by the design organization responsible for review and approval of the procurement specifications. Measures shall be established, and appropriate, for examination of products upon delivery.

Chapter 8 - Not Applicable

Chapter 9 - Applicable to the qualification of welders and welding procedures (ASME Section IX) for Radwaste/Augmented D system. (Pressure boundaries only.)

Chapter 10 - Applicable only to inspection of those items and activities affecting Radwaste/Augmented D systems within the quality assurance boundaries as specified in the USAR, Table 3.2-1, and further amplified by the appropriate design drawings.

Chapter 11 - Applicable

Chapter 12 - Not Applicable

Chapter 13 - Applicable

Chapter 14 - Applicable

Chapter 15 - Applicable

Chapter 16 - Applicable

Chapter 17 - Applicable

Chapter 18 - Applicable

PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIAL

Chapter 1 - Applicable

Chapter 2 - Applicable

Chapter 3 - Applicable, design activities are not normally performed by CPS for radioactive material packaging, however, audits of suppliers establish that the design was accomplished under control of an NRC approved QA program.

Chapter 4 - Applicable

Chapter 5 - Applicable

Chapter 6 - Applicable

Chapter 7 - Applicable, measures such as source surveillance and audits of records should be taken as appropriate to ensure that the design and fabrication of packaging were performed under the control of an NRC-approved QA program.

Chapter 8 - Applicable

Chapter 9 - Applicable, special processes such as welding or nondestructive testing are not normally performed by CPS. However, if packaging requires major repairs necessitating use of special processes, e.g., welding or heat treating, measures shall be established to ensure that the special processes are controlled.

Chapter 10 - Applicable, visual inspections shall be performed upon receipt of packaging to ensure compliance with certificates of compliance.

Chapter 11 - Applicable

Chapter 12 - Applicable

Chapter 13 - Applicable, all conditions identified in a certificate of compliance when using packages shall be adhered to.

Chapter 14 - Applicable

Chapter 15 - Applicable

Chapter 16 - Applicable, measures are established for obtaining corrective actions from suppliers and for ensuring that follow-up is documented to verify that corrective actions were implemented and effective.

Chapter 17 - Applicable, records showing evidence of delivery of packages to a carrier and proof that all NRC and DOT requirements have been satisfied shall also be retained.

Chapter 18 - Applicable, audits are performed on the supplier of packaging to ensure compliance with the certificate of compliance.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 29 MATRIX OF CHANGES

Page in QAM Rev. 29	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation/Justification
		Global Changes		
All	Various	Changes were made to: update revision number from "28" to "29"; change "Purpose/Scope" to "Scope" and "Description" to "Requirements" in each chapter; eliminate incorrect wording; improve readability; provide correct sentence structure and punctuation; standardize; reformat; and reorder lists. Specific wording and acronym changes include the use of "assessment" as synonymous with "audit", "NOS" as synonymous with "NO" and/or "Nuclear Oversight", and "QAP" as synonymous with "Quality Assurance Program".	Editorial	These editorial changes remove redundancy, improve readability and standardize the Manual in the format used by the Regional Operating Group (ROG) to provide uniformity and consistency between stations. These changes do not affect authority, independence, or management reporting levels previously established for organizations performing quality assurance functions as described in the Quality Assurance Program Description (QAPD). This change was evaluated for QAPD impact via 10CFR50.54(a) evaluation dated 07/19/01. These changes are global throughout Revision 29 and will not be addressed further in this matrix.
		Concurrence Authorization		
Page ii	Text	Changed "Revision 28" to "Revision 29".	Editorial	Editorial change to accurately reflect the Revision of the Quality Assurance Manual (QAM) for which concurrence is documented.
Page ii	Not Applicable	Changed "Manager - Clinton Power Station" to "Plant Manager."	Editorial	This is a title change to this page only. Global changes to this title and any changes in duties and responsibilities will be addressed by future revision. The title change will not be addressed further in this matrix.
Page ii	Not Applicable	Changed "Director - Nuclear Training" to "Training Director."	Editorial	This is a title change to this page only. Global changes to this title and any changes in duties and responsibilities will be addressed by future revision. The title change will not be addressed further in this matrix.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 29 MATRIX OF CHANGES

Page in QAM Rev. 29	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation/Justification
Page ii	Not Applicable	Changed "Manager - Business Operations" to "Business Operations Director."	Editorial	This is a title change to this page only. Global changes to this title and any changes in duties and responsibilities will be addressed by future revision. The title change will not be addressed further in this matrix.
Page ii	Not Applicable	Changed "Manager - Maintenance" to "Maintenance Director."	Editorial	This is a title change to this page only. Global changes to this title and any changes in duties and responsibilities will be addressed by future revision. The title change will not be addressed further in this matrix.
Page ii	Not Applicable	Changed "Manager - Nuclear Station Engineering" to "Site Engineering Director."	Editorial	This is a title change to this page only. Global changes to this title and any changes in duties and responsibilities will be addressed by future revision. The title change will not be addressed further in this matrix.
Page ii	Not Applicable	Changed "Manager - Outage Management" to "Work Management Director."	Editorial	This is a title change to this page only. Global changes to this title and any changes in duties and responsibilities will be addressed by future revision. The title change will not be addressed further in this matrix.
Page iv	Not Applicable	Changed "three main sections" to "two main sections". Also see the first Global Change.	Editorial	This is a editorial change made to move toward standardization of the Manual format used by the Regional Operating Group (ROG) to provide uniformity and consistency between stations. Ref. the first Global Change on this matrix. This change was evaluated for QAPD impact via 10CFR50.54(a) evaluation dated 07/19/01.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 29 MATRIX OF CHANGES

Page in QAM Rev. 29	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation/Justification
		Chapter 1		
1-3	3.8	Changed "Facility Review Group (FRG)" to "Plant Operations Review Committee (PORC)."	Editorial	This is an editorial change previously approved via CPS Updated Safety Analysis Report (USAR) Change Log 9-378. This change only revises the title of the group; functions are not impacted. This title change is global and is not addressed further in this matrix.
		Chapter 2		
2-1	N/A This is a listing under 2.2	Added a reference to Regulatory Guide 1.28.	Editorial	The addition of reference to Regulatory Guide 1.28 is editorial as it is already listed in the USAR Table 1.8. NUREG 0800 Standard Review Plan 17-1 & 17-3 list this RG as one issued in response to Appendix B of 10CFR Part 50. This change was evaluated for QAPD impact via 10CFR50.54(a) evaluation dated 07/17/01.
		Chapter 3		
Pages 3-1 → 3-4	Various	Changed "hardware change" to "design change" in various locations throughout Chapter 3.	Editorial	These are editorial changes made to align the CPS Design Control processes with the remainder of Exelon. Exelon processes and procedures do not use the term "hardware change." This change was previously evaluated for QAPD impact via 10CFR50.54(a) evaluation dated 3/5/01
		Chapter 4		
		Chapter 5		
		Chapter 6		

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 29 MATRIX OF CHANGES

Page in QAM Rev. 29	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation/Justification
		Chapter 7		
		Chapter 8		
		Chapter 9		
		Chapter 10		
		Chapter 11		
		Chapter 12		
		Chapter 13		
		Chapter 14		
		Chapter 15		
		Chapter 16		

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 29 MATRIX OF CHANGES

Page in QAM Rev. 29	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation/Justification
		Chapter 17		
		Chapter 18		
18-1 through 18-3, B-1 & B-2		This entire chapter was reformatted/reworded. Assessment frequencies were moved from the body of this chapter to a new Appendix B - (Changed existing Appendix B to Appendix C)	Editorial	These editorial changes /administrative improvements remove redundancy, improve readability and standardize the Manual in the format used by the Regional Operating Group (ROG) to provide uniformity and consistency between stations. This change was evaluated for QAPD impact via 10CFR50.54(a) evaluation dated 7/19/01 and met prescreening criteria a.
B-3		Moved NOS requirement for "forwarding assessment reports to the NSRB and ISEG" from 18.2.4 (R/28) to 3.3.d (R/29)	Editorial	This change in placement is considered an editorial change and was made to maintain Exelon formatting. This change was evaluated for QAPD impact via 10CFR50.54(a) evaluation dated 7/19/01 and met prescreening criteria a.
18-2	2.1.4	Removed words from 18.2.1.b.7 which read assessment of "any other area of unit operation as considered appropriate by the NSRB or the CPS Site Vice President or Regional Operating Group Nuclear Oversight Director". It is covered more generically as "Additional unscheduled assessments may also be performed at various stages of activities, based on the nature and safety significance of the work being done; to verify continued adherence to and effectiveness of the quality systems."	Editorial	This is considered an administrative improvement. It does not belong in Appendix B because it has no specified frequency; and the change still provides a method to perform the assessments without limit to who deems them appropriate. This change was evaluated for QAPD impact via 10CFR50.54(a) evaluation dated 7/19/01

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 29 MATRIX OF CHANGES

Page in QAM Rev. 29	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation/Justification
B-1 & B-2	Assessment n. & k.	Added "assessment of NSRB Activities" on a maximum 5-year frequency, and an "assessment of randomly selected procedures" on a 24-month maximum frequency, to Appendix B - Assessment Frequency.	Editorial Change	These assessments were previously performed under the generic assessment title of "The performance of activities required by the Quality Assurance Program to meet the criteria of Appendix B of 10CFR50." They will continue to be performed on a 24-month frequency. This change was evaluated for QAPD impact via 10CFR50.54(a) evaluation dated 7/19/01
B-1	Not Applicable	Change text of Paragraph from "The fire protection programmatic controls including the implementing procedures at least once per 24 months by qualified licensee Nuclear Oversight personnel;" to "The Fire Protection Program and implementing procedures, including an inspection and assessment of the Fire Protection and Loss Prevention Program, shall be performed utilizing an outside qualified fire protection consultant at least once every 24 months;"	Change	Utilizing USNRC SER dated 8/30/96, W. H. Ruland to D. M. Smith (PECO Nuclear), the frequency for the performance of Fire Protection audit/assessment activities was changed. The SER referenced indicated the change was acceptable to the NRC and, therefore, the change is acceptable for implementation at CPS. This change has been implemented.
		Delete 18.2.1.b.9 from CPS QAM Revision 28.	Change	See justification for change to Fire Protection audit/assessment frequency, above.
		Delete 18.2.1.b.10 from CPS QAM Revision 28	Change	See justification for change to Fire Protection audit/assessment frequency, above.
B-2	Not Applicable	Removed the words describing lesser frequency requirements from the Security and Emergency Plan assessments, and left a reference to where the requirements could be found.	Editorial	These detailed requirements are located in 10CFR50.54 (p)(ii) and 10CFR50.54 (t)(ii) respectively. This removes duplicate language and meets prescreening criteria h. This change was evaluated for QAPD impact via 10CFR50.54(a) evaluation dated 7/19/01

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 29 MATRIX OF CHANGES

Page in QAM Rev. 29	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation/Justification
		Appendix A		
N/A	Not Applicable	Deleted the definition of "Hardware Change" from the definitions since it is no longer used.	Editorial	This is an editorial change made to align the CPS Design Control processes with the remainder of Exelon. Exelon processes and procedures do not use the term "hardware change." This change was previously evaluated for QAPD impact via 10CFR50.54(a) evaluation dated 3/5/01.
A.3 and A.4	Not Applicable	Changed "Facility Review Group (FRG)" to "Plant Operations Review Committee (PORC)." Moved definition of Plant Operations Review Committee to Page A.4 to retain alphabetical order in Appendix A.	Editorial	This is an editorial change previously approved via CPS Updated Safety Analysis Report (USAR) Change Log 9-378. This change only revises the title of the group; functions are not impacted.
N/A	Not Applicable	Deleted definition of "Plant Change."	Editorial	The term "Plant Change" is not addressed by the Exelon design change process. All design changes are encompassed by the definition of "Design Change;" therefore, this definition is no longer necessary. This change was previously evaluated for QAPD impact via 10CFR50.54(a) evaluation dated 3/5/01.
		Appendix B		
B-1	Assessment e.	The frequency for the performance of Corrective Action audit/ assessment activities was changed from a 12-month maximum to a 24-month maximum frequency.	Change	Utilizing USNRC SER for Indian Point Nuclear Generating Unit No.3 and James A. Fitzpatrick, [Power Authority of the State of New York], dated 3/25/99, the frequency for the performance of Corrective Action audit/assessment activities was changed. The SER referenced indicated the change was acceptable to the NRC and, therefore, the change is acceptable for implementation at

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 29 MATRIX OF CHANGES

Page in QAM Rev. 29	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation/Justification
				CPS. This change has been implemented. This change was evaluated for QAPD impact via 10CFR50.54(a) evaluation dated 7/17/01 and USAR Change Log No. 10-054.
		Appendix C		
C-1 through C-7	Not Applicable	This Appendix was previously Appendix B. Editorial changes only.	Editorial	This Appendix was previously Appendix B. Removed double spacing to reduce size, editorial changes only.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 29a MATRIX OF CHANGES

Page in QAM Rev. 29a	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation/Justification
		Generic to Entire QA Manual		
All	Not Applicable	Changed "Revision 29" to "Revision 29a".	Editorial	Editorial change to accurately reflect the Revision of the Quality Assurance Manual (QAM) for which concurrence is documented.
Various Global Change	Various Global Change	Changed "Manager - Nuclear Oversight" to "Nuclear Oversight Manager"	Editorial	This is a title change only. There is no change in duties and responsibilities. This change is global throughout Revision 29a. This change will not be addressed further in this matrix.
Various Global Change	Various Global Change	Changed "Manager - Clinton Power Station" to "Plant Manager."	Editorial	This is a title change only. There is no change in duties and responsibilities. This change is global throughout Revision 29a. This change will not be addressed further in this matrix.
Various Global Change	Various Global Change	Changed "Director - Nuclear Training" to "Training Director."	Editorial	This is a title change only. There is no change in duties and responsibilities. This change is global throughout Revision 29a. This change will not be addressed further in this matrix.
Various Global Change	Various Global Change	Changed "Manager - Business Operations" to "Business Operations Director."	Editorial	This specific change is a title change. It documents no change in duties and responsibilities. This change is global throughout Revision 29a. This change will not be addressed further in this matrix.
Various Global Change	Various Global Change	Changed "Manager - Maintenance" to "Maintenance Director."	Editorial	This is a title change only. There is no change in duties and responsibilities. This change is global throughout Revision 29a. This change will not be addressed further in this matrix.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 29a MATRIX OF CHANGES

Page in QAM Rev. 29a	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation/Justification
Various Global Change	Various Global Change	Changed "Manager - Nuclear Station Engineering" to "Site Engineering Director."	Editorial	This is a title change only. This change is global throughout Revision 29a. This change will not be addressed further in this matrix.
Various Global Change	Various Global Change	Changed "Manager - Outage Management" to "Work Management Director."	Editorial	This is a title change only. There is no change in duties and responsibilities. This change is global throughout Revision 29a. This change will not be addressed further in this matrix.
Various Global Change	Various Global Change	Changed "Outage Management" to "Work Management".	Editorial	This editorial change was made to reflect current structure / organizational titles and higher level responsibilities.
		Authorization		
i	Text - 5th paragraph	Changed "each and every employee" to "all personnel".	Editorial	This editorial change was made to improve readability.
		Concurrence Authorization		
		Chapter 1		
1-2	2.7	Changed "Nuclear Station Engineering (NSED)" to "Site Engineering".	Editorial	This editorial change is global throughout the manual. The change was made to reflect current structure / organizational titles.
1-3	3.5	Software QA Program responsibilities	Change	This responsibility was previously under Business Operations (Plant Support) and now falls under Site Engineering.
		Chapter 2		
2-3	3.4e	Software QA Program responsibilities	Change	This responsibility was previously under Business Operations (Plant Support) and now falls under Site Engineering.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 29a MATRIX OF CHANGES

Page in QAM Rev. 29a	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation/Justification
2-3	3.4	Changed "NSED" to "Site Engineering".	Editorial	This editorial change was made to reflect current structure / organizational titles.
		Chapter 3		
3-1, 3-2	2.2, 3.2	Changed "NSED" (and/or "Nuclear Station Engineering") to "Site Engineering".	Editorial	This editorial change was made to reflect current structure / organizational titles.
3-2	3.2	Removed "Nuclear Engineering" before "Configuration Management Program" in Paragraph 3.2 to reflect current department names and remove redundancy.	Editorial	This editorial change was made to improve readability and remove redundancy.
3-1 3-2	2.4.e 3.2.e, 3.3.a	Changed verbiage on "unreviewed safety question" to read "that requires NRC approval pursuant to 10CFR50.59"	Change Admin.	This QA Manual change was made to reflect current verbiage /requirements based on changes made to 10CFR50.59.
3-2	2.5	Changed "required to make input to," to: "required to provide input to," to clarify and improve readability.	Editorial	This editorial change was made to provide clarity and improve readability.
3-3	3.3	Changed "Licensing" to "Regulatory Assurance" to reflect current department name.	Editorial	This is a title change only. There is no change in duties and responsibilities. This change is global throughout Revision 29a. This change will not be addressed further in this matrix.
3-3	3.1.b	Changed "Facility Review Group" to "Plant Operations Review Committee". Change was formerly reviewed and approved.		This name change was evaluated in a previous manual update and 50.54a evaluation. This change will not be addressed further in this matrix.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 29a MATRIX OF CHANGES

Page in QAM Rev. 29a	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation/Justification
		Chapter 4		
		Chapter 5		
		Chapter 6		
		Chapter 7		
		Chapter 8		
		Chapter 9		
		Chapter 10		
10-2	3.2.b	Deleted the word "welding" in front of "inspections" to remove superfluous verbiage.	Editorial	…"welding inspections" was considered redundant to "inspections" and unnecessary. Removed for clarity. Site Engineering performs various inspections for the ISI program.
		Chapter 11		
		Chapter 12		
		Chapter 13		

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 29a MATRIX OF CHANGES

Page in QAM Rev. 29a	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation/Justification
		Chapter 14		
		Chapter 15		
15-1	2.1.f.e	Changed "other" to "Miscellaneous Evaluation (other)" [Used for non-hardware dispositions.]	Editorial	Editorial changes made to reflect current terminology used for dispositions other than "use-as-is", "repair", "rework" or "reject".
		Chapter 16		
		Chapter 17		
		Chapter 18		
		Appendix A		
		Appendix B		
		Appendix C		