AUTHORIZATION

The purpose of the Clinton Power Station (CPS)~~Illinois Power Nuclear~~ Quality Assurance Program is to provide for safe and reliable operation of CPS~~the Clinton Power Station~~ with planned and systematic actions necessary to provide adequate confidence that structures, systems, or components will perform ~~satisfactory~~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~~Illinois Power's~~ policy and is applicable to all personnel and activities affecting the safe operation of the CPS~~Clinton Power Station~~. This manual has been prepared to document the systems in effect for assuring that operation of the CPS~~Clinton Power Station~~ meets or exceeds quality requirements of applicable specifications, rules, and governing regulations.

The Manager-Quality Assurance 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~~Illinois Power Nuclear~~ 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, each and every employee must consciously implement the requirements of the CPS~~Illinois Power Nuclear~~ 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~~Illinois Power Nuclear Program~~ Quality Assurance M~~m~~anual 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.

~~Walter G. MacFarland~~ ~~2/12/98~~
Vice President/Chief Nuclear Officer~~———~~/ Date

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 27, is given the following Departmental Concurrence Authorizations:

P. D. HINNENKAMP, MANAGER,
CLINTON POWER STATION

R. M. MOORE, MANAGER,
QUALITY ASSURANCE

V. J. CWIETNIEWICZ, DIRECTOR,
NUCLEAR TRAINING

W. B. CARSKY, (Acting) MANAGER,
NUCLEAR STATION ENGINEERING

G. L. BAKER, MANAGER,
NUCLEAR SUPPORT

R. F. PHARES, MANAGER,
NUCLEAR SAFETY & PERFORMANCE IMPROVEMENT

J. A. GOLDMAN, MANAGER
WORK MANAGEMENT

R. A. SCHENCK, MANAGER
MAINTENANCE

M. V. LUKOWSKI, DIRECTOR
PROJECTS/CONTRACTS

~~CONCURRENCE AUTHORIZATION~~

~~The Illinois Power Nuclear Program Quality Assurance Program (QAP) applies to every member of the company performing safety / quality related work at Clinton Power Station. Specific responsibilities shall be assigned by Illinois Power management and supervision, consistent with the requirements described in the Illinois Power Nuclear Program Quality Assurance Manual. The main responsibility for the Quality Assurance Program is carried out by IP departments~~

~~In recognition of the QAP responsibilities, Illinois Power Nuclear Program Quality Assurance Manual Revision 26 is given the following Departmental Concurrence Authorizations:~~

~~W.D. Romberg~~	~~G.L. Baker~~
~~W.D. Romberg, Manager~~	~~G.L. Baker, Manager~~
~~Clinton Power Station~~	~~Quality Assurance~~
~~J.F. Palchak~~	~~L.S. Wigley~~
~~J.F. Palchak, Manager~~	~~L.S. Wigley, Manager~~
~~Nuclear Training & Support~~	~~Nuclear Station Engineering~~
~~K.F. Johnson~~	~~R.F. Phares~~
~~K.F. Johnson, Manager~~	~~R.F. Phares, Manager~~
~~Purchasing and Material Control~~	~~Nuclear Safety and Performance Improvement~~

INTRODUCTION

Illinois Power Company (IP), as owner of Clinton Power Station (CPS), has ultimate responsibility for the quality assurance program which 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;" 10CFR~~, Part~~ 71, 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~~IPNuclear~~ 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 M~~m~~anual is arranged in eighteen chapters which correspond with the eighteen criteria contained in 10CFR50 Appendix B and 10CFR71, Subpart H. Each chapter is divided ~~broken down~~ into three main sections which describe the purpose and scope of that chapter, a description of the quality program, and the division of responsibilities. The Quality Assurance organization identifies~~approves~~ the distribution and is responsible for the maintenance of this M~~m~~anual in accordance with approved departmental procedures.

Appendix A of this M~~m~~anual is a glossary of terms applicable to the CPS~~Illinois Power Nuclear~~ Quality Assurance Program.

Appendix B of this M~~m~~anual 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.

CHAPTER

1

ORGANIZATION

1.1 PURPOSE/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~~or~~ components (SSCs) for the Clinton Power Station (CPS).

1.2 DESCRIPTION

1.2.1 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.

1.2.2 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.

1.2.3 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.

1.2.4 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 Manager - Quality Assurance has the authority to initiate a Stop Work Action. ~~The~~ Upon the initiation of a Stop Work Action, the Manager - CPS~~Clinton Power Station~~ has the authority and responsibility to place the plant in a safe and stable condition.

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

Organizational Interfaces

1.2.6 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~~IP~~ organizations. Any department may perform these quality assurance activities provided ~~that~~ personnel are adequately trained, qualified/certified, and the ~~these~~ 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 Vice President/Chief Nuclear Officer~~Senior Vice President - Energy Supply~~ as necessary to obtain resolution.

1.2.7 ~~Work may be delegated to qualified outside organizations by contract for such activities as design, special processes, inspections, etc.~~ Selected work may be delegated to qualified outside organizations by Nuclear Program departments. The responsibility for exercising engineering control rests with Nuclear Station Engineering, and operational controls with CPS Plant Staff. Prior to initiation of work, the qualified individual(s) or organizational elements within CPS~~IP~~ have their responsibilities identified for the control and quality of delegated work.

1.3 RESPONSIBILITIES

This section describes the organizational structure and responsibilities ~~within IP~~ for managing and implementing the Qquality Aassurance Pprogram for the operation of CPS.

~~1.3.1 Senior Vice President - Energy Supply~~

~~The Senior Vice President - Energy Supply has the overall responsibility for engineering, design, procurement, modification, testing, operation and quality assurance at CPS. Execution of these responsibilities is delegated to a Vice President.~~

1.3.1 ~~1.3.2 Vice President~~ Vice President/Chief Nuclear Officer

~~The Vice President is responsible for maintaining and assessing the overall effectiveness of the Quality Assurance Program. The Vice President is responsible for assuring that the authority and independence of personnel performing quality assurance functions are such that they can effectively assure the conformance to quality requirements and are sufficiently independent from cost and scheduling when opposed to safety considerations.~~ The Vice President/Chief Nuclear Officer (CNO) reports to the Illinova Chief Executive Officer (CEO) and is responsible for accomplishing strategic objectives related to safety, economy, reliability, operation, and maintenance of CPS. The CNO is the corporate executive having responsibility for overall nuclear safety of CPS as identified in the Technical Specifications. The CNO is further responsible for nuclear quality control and assurance. He represents the Company before the NRC. The 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.

1.3.2 Assistant Vice President

The Assistant Vice President assists in the performance of the duties of the Vice President/Chief Nuclear Officer, with specific emphasis on plant recovery and outage completion activities. This position may participate on committees and in activities providing guidance to the site staff. In the absence of the Vice President/Chief Nuclear Officer, the Assistant Vice President may assume responsibilities of the office.

1.3.3~~2~~ Manager - Clinton Power Station

The Manager - CPS~~Clinton Power Station~~ reports to the Vice President/Chief Nuclear Officer~~Vice President~~ and is responsible for the overall facility operation including the direction of the operation, refueling, chemistry, radiation protection, and radwaste activities ~~safe, reliable and efficient operation~~ of CPS~~the Clinton Power Station~~ in accordance with the operating license. This includes ensuring that the CPS~~IP Nuclear~~ Quality Assurance Program, as described in subsequent sections of this manual, is incorporated in plant procedures and implemented by the Plant Staff~~Clinton Power Station~~ organization. The~~organization.~~ Manager - CPS also administers the Corrective Action Program (CAP) to assure conditions adverse to plant safety and/or quality are identified, evaluated, reported, corrected, reviewed and trended.

1.3.4~~3~~ Manager - Nuclear Station Engineering

The Manager - Nuclear Station Engineering reports to the Vice President/Chief Nuclear Officer~~Vice President~~ and is responsible for the development, direction and overall coordination of power plant engineering activities performed by the Nuclear Station Engineering Department (NSED) for the CPS~~Clinton Power Station~~. These responsibilities include: coordination of all interface with the Authorized Inspection Agency (AIA), and provisions for the establishment of Authorized Nuclear Inspector (ANI) hold or witness points and access to facilities and records. The Manager - NSED ensures ~~that~~ these activities are performed in accordance with the requirements of the CPS~~IP Nuclear~~ Quality Assurance Program.

1.3.5~~4~~ Manager - Nuclear ~~Training &~~ Support

The Manager - Nuclear ~~Training &~~ Support reports to the Vice President/Chief Nuclear Officer~~Vice President~~ and is responsible for providing direction of access authorization, ~~nuclear training,~~ security, emergency preparedness~~planning~~, fitness for duty, ~~material support, receiving, warehousing,~~facilities, records management, document control, industrial safety, controller, operation and management of telecommunications and information systems, and for corporate and plant integration in these functional support disciplines. The Manager - Nuclear ~~Training &~~ Support ensures that these activities are performed in accordance with the requirements of ~~the~~ CPS~~IP Nuclear~~ Quality Assurance Program.

1.3.6~~5~~ Nuclear Review and Audit Group

The Nuclear Review and Audit Group (NRAG) reports to the Vice President/Chief Nuclear Officer~~Vice President~~ and is responsible for the independent safety review function. The NRAG 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. The NRAG also has direct access to the Illinova CEO and the Board of Directors Nuclear Operations Committee.

1.3.7~~6~~ Facility Review Group

The Facility Review Group (FRG) is an on-site committee whose function is to advise the Manager - CPS~~Clinton Power Station~~ on matters related to nuclear safety.

1.3.8~~7~~ Manager - Quality Assurance

The Manager - Quality Assurance reports to the Vice President/Chief Nuclear Officer~~Vice President~~ and is responsible for Clinton Power Station~~IP~~'s overall ~~Nuclear~~ Quality Assurance Program. The Manager - Quality Assurance 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 the CPS~~Clinton Power Station~~. The Manager - Quality Assurance interfaces with the Nuclear Regulatory Commission, and the Authorized Inspection Agency for the Quality Assurance Program. The Manager - Quality Assurance 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.

1.3.9~~8~~ Manager-Nuclear Safety & Performance Improvement (NSPI)

The Manager-Nuclear Safety & Performance Improvement Department reports to the Vice President/Chief Nuclear Officer~~Vice President~~ and is responsible to ensure continued improvements in the plant's safety performance ~~while continuing to safely operate the Clinton Power Station~~. This department is dedicated to the development, coordination, and monitoring of site-wide improvements to elevate identified programmatic weaknesses to management for timely corrective action. The Manager-NSPI~~department~~ is also responsible for maintain~~s~~ing the operating licenses and permits, ~~manages~~ the Updated Safety Analysis Report (USAR), ~~manages~~ the Environmental Report (ER) for continued programmatic~~programmatic~~ compliance, and administers a tracking program for 10CFR21 items.

The Manager-NSPI ensures ~~that~~ the Independent Safety Engineering Group (ISEG) review function is maintained~~maintained~~ separate and independent from line management.

~~The Manager-NSPI ensures that the Corrective Action Group implements a Corrective Action Program (CAP) to assure conditions adverse to plant safety and/or quality are identified, evaluated, reported, corrected, reviewed and trended.~~

The Manager-NSPI ensures ~~that~~ these activities are performed in accordance with the requirements of the CPS~~IP Nuclear~~ Quality Assurance Program.

~~1.3.10 Manager - Purchasing and Material Control~~

~~The Manager - Purchasing and Material Control reports to the Senior Vice President of the Support Services Business Group (Headquarters) and is responsible for selecting qualified suppliers, for preparing and issuing purchase orders and ensuring that they include necessary technical, quality and commercial terms and conditions, and that appropriate reviews, are accomplished prior to release of a purchase order. The Manager - Purchasing and Material Control ensures that these activities are performed in accordance with the requirements of the IP Nuclear Quality Assurance Program.~~

1.3.10 Manager - Maintenance

The Manager - Maintenance reports to the Vice President/Chief Nuclear Officer 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 Manager - Maintenance ensures that these activities are performed in accordance with the requirements of the CPS Quality Assurance Program.

1.3.11 Manager - Work Management

The Manager-Work Management reports to the Vice President/Chief Nuclear Officer and is responsible for overall performance of on-line and outage scheduling including approval of outage and on-line strategies and milestones. The Manager-Work Management is responsible for managing station material inventory, for selecting qualified suppliers, for preparing and issuing purchase orders and ensuring they include necessary technical, quality and commercial terms and conditions, and that appropriate reviews, are accomplished prior to release of a purchase order. The Manager Work Management ensures that these activities are performed in accordance with the requirements of the CPS Quality Assurance Program.

1.3.12 Director - Nuclear Training

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

1.3.13 Director - Projects/Contracts

The Director-Projects/Contracts reports to the Vice President/Chief Nuclear Officer and is responsible for implementation of approved site modifications, projects, and management/administration of key service contracts. The Director - Projects/Contracts ensures that these activities are performed in accordance with the requirements of the CPS Quality Assurance Program.

CHAPTER

2

QUALITY ASSURANCE PROGRAM

2.1 PURPOSE/SCOPE

The purpose of this chapter is to define how the CPS~~IP Nuclear~~ 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.

2.2 DESCRIPTION

2.2.1 The CPS~~Illinois Power Company's Nuclear~~ Quality Assurance Program comprises all those planned and systematic actions necessary to provide adequate confidence that ~~a~~ CPS~~Clinton Power Station~~ structures, systems, and~~or~~ components will perform satisfactorily in service. Quality assurance includes qQuality cControl which comprises the verification of those physical characteristics of material, structure, component, or system which provide a means to control the quality of the material, structure, component, or system to predetermined requirements.

2.2.2 The CPS~~Illinois Power Company's Nuclear~~ Quality Assurance Program is based upon 10CFR50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." The requirements of 10CFR71, S~~s~~ubpart 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~~Illinois Power~~ 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 1.30, 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".

2.2.3 The Quality Assurance program description also includes the following sections of the CPS Operational Requirements Manual (ORM). ~~The CPS ORM contains administrative requirements which were removed from the CPS Technical Specifications with the implementation of the Improved Technical Specifications in January, 1996.~~ The specific ORM sections are as follows:

- ORM Section 6.5, Review and Audit;
- ORM Section 6.8.2, Procedures and Programs - Review and Approval;
- ORM Section 6.8.3, Procedures and Programs - Temporary Changes and;
- ORM Section 6.10, Record Retention.

2.2.4 Quality Assurance Program Revisions

The Quality Assurance program is reviewed on an ~~receives~~ ongoing basis~~reviews~~ and ~~is~~ 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~~IP Nuclear Program~~ 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).

2.2.5 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 ~~that~~ personnel performing activities affecting quality are appropriately trained in the principles and techniques of the activity being performed; ~~are~~ instructed as to purpose, scope, and implementation of governing documents; and ~~that they~~ 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 recertifying, as determined by management or program commitment.

2.2.6 CPS~~IP Nuclear~~ Quality Assurance Program Evaluations

Regular reviews of the CPS~~IP Nuclear~~ Quality Assurance Program to assess the scope, status, adequacy, compliance, and overall effectiveness are performed under the direction of the Vice President/Chief Nuclear Officer~~Vice President~~. This review function consists of meetings with key Quality Assurance personnel, as well as review of audits and reports, and the performance of a~~n~~ CPS~~IP Nuclear~~ 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. Independent audits of other organizations performing activities related to quality are accomplished regularly under the direction of the Manager - Quality Assurance.

2.3 RESPONSIBILITIES

2.3.1 Vice President/Chief Nuclear Officer~~Vice President~~

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

2.3.2 Nuclear Program Departments

a. Implement and comply with the CPS~~IP Nuclear~~ 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.

2.3.3 CPS Plant Staff

a. Operate ~~and maintain~~ CPS in a safe~~,~~ and reliable~~, and efficient~~ mode ~~of operation~~.

2.3.4 Nuclear Station Engineering

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

b. Implement the Inservice Inspection Program.

2.3.5 Nuclear ~~Training &~~ Support

~~a. Maintain and implement a Licensed Operator Training program, Maintenance and Technical Training program and a General Employee Training program.~~

~~b~~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.

~~c~~b. Establish, maintain and implement a Records Management Program including the CPS Records Storage Facilities.

2.3.6 Quality Assurance

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.

2.3.7 Nuclear Training

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

2.3.8 Maintenance

a. Maintain CPS in a safe, and reliable mode.

2.3.9 Work Management

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

2.3.10 Projects/Contracts

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

CHAPTER

3

DESIGN CONTROL

3.1 PURPOSE/SCOPE

The purpose of this chapter is to establish the requirements, responsibilities and control measures for assuring ~~that~~ 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.

3.2 DESCRIPTION

3.2.1 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 hardware changes are designed and implemented in accordance with applicable codes, standards and regulatory commitments.

3.2.2 NSED~~The Nuclear Station Engineering Department~~ has overall responsibility for design control activities at ~~Clinton Power Station~~ (CPS~~)~~. These design control activities are managed within the context of the Nuclear Engineering Configuration Management Program, which also includes final design approval of hardware changes for incorporation into the plant. Processing of a hardware 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.

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

3.2.4 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 NSED~~Nuclear Station Engineering~~ or a qualified consultant-engineer is required to include the following considerations in the design of each hardware 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 an "unreviewed safety question".

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.

3.2.5 The organization which produces and approves the design/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 make 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 ~~that~~ the installation satisfies all specified design requirements.

3.2.6 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.

3.2.7 Design verification for the final design products will normally be done by an independent group or person within the organization actually producing the design. When this is a consultant-engineer organization, NSED~~Nuclear Station Engineering~~ may choose to conduct, or direct, additional independent design verifications.

3.2.8 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.

3.2.9 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 ~~that~~ the test procedure, including acceptance criteria, be submitted to CPS~~Illinois Power~~ or ~~its~~a designee for review and approval prior to performance of the test.

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

3.3 RESPONSIBILITIES

3.3.1 CPS Plant Staff

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

~~b. Incorporate approved design changes into CPS.~~

~~c. Employ controls which maintain the "as-built" and "as-modified" condition of the plant.~~

~~d~~b. Assure ~~that the~~ proposed design changes affecting nuclear safety and associated safety evaluations ~~has~~have been reviewed by the Facility Review Group.

3.3.2 Nuclear Station 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 the Licensing Department for updating the USAR to reflect current plant conditions.

e. Determine if the proposed design change involves an "unreviewed safety question".

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

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

3.3.3. Nuclear Safety & Performance Improvement

a. Review and evaluate Technical Specification changes and unreviewed safety questions identified during the hardware change process and obtain the necessary reviews and approvals.

3.3.4 Maintenance

a. Incorporate approved design changes into CPS.

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

CHAPTER

4

PROCUREMENT DOCUMENT CONTROL

4.1 PURPOSE/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.

4.2 DESCRIPTION

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

4.2.2 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.

4.2.3 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.

4.2.4 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 evaluations of the supplier's quality assurance program, the supplier's technical capabilities and the supplier's commercial ability.

4.2.5 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.

4.3 RESPONSIBILITIES

4.3.1 Nuclear Program Departments

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

~~4.3.2 Nuclear Training & Support~~

~~a. Review purchase requisitions for QA requirements.~~

4.3.~~3~~2 ~~Purchasing and Material Control~~Work Management and Projects/Contracts

a. Review purchase requisitions for QA requirements.

~~a~~b. Prepare procurement documents for award to qualified suppliers.

~~b~~c. Review procurement documents for completeness.

4.3.~~4~~3. Nuclear Station Engineering

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

b. Review and approve design changes that result from procurements.

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

4.3.~~5~~4 Quality Assurance

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

CHAPTER

5

INSTRUCTIONS, PROCEDURES AND DRAWINGS

5.1 PURPOSE/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.

5.2 DESCRIPTION

5.2.1 Each CPS~~IP~~ 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 ~~that~~ 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.

5.2.2 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.

5.3 RESPONSIBILITIES

5.3.1 Nuclear Program 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.

CHAPTER

6

DOCUMENT CONTROL

6.1 PURPOSE/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.

6.2 DESCRIPTION

6.2.1 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 which 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.

6.2.2 Documents such as parts lists, vendor manuals and written correspondence used in the design, operation, maintenance or testing are controlled in accordance with departmental procedures which 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.

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

6.3 RESPONSIBILITIES

6.3.1 Nuclear Program Departments

a. Review, approve and maintain controlled documents generated in accordance with CPS Records Management Standards.

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

6.3.2 Nuclear ~~Training &~~ Support

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.

CHAPTER

7

CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

7.1 PURPOSE/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.

7.2 DESCRIPTION

7.2.1 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.

7.2.2 CPS~~IP~~ 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 ~~that~~ 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.

7.2.3 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~~s~~ 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.

7.2.4 In addition to reviewing a supplier's capability to meet the commercial requirements of the procurement documents, a review is performed to ensure ~~that~~ 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.

7.2.5 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. Source inspections at the supplier's facility are accomplished by qualified individuals or qualified agents to verify ~~that~~ 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.

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

7.2.7 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.

7.2.8 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 ~~that~~ 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.

7.2.9 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.

7.3 RESPONSIBILITIES

7.3.1 Nuclear Program Departments

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

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

7.3.2 Nuclear Station Engineering

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

b. 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.

7.3.3. ~~Nuclear Training & Support~~ Work Management

a. Implement procedures for ~~the~~ receiving, storing, and issuing ~~of~~ purchased items.

b. Qualified inspectors perform required receipt inspection of materials or equipment prior to issuing the material or equipment for operation.

7.3.4 ~~Purchasing and Material Control~~Work Management and Projects/Contracts

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

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

7.3.5 Quality Assurance

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~~survillances~~ and audits at suppliers' facilities to verify compliance with the quality and technical requirements of procurement documents.

c. Maintain a database identifying qualified suppliers.

CHAPTER

8

IDENTIFICATION AND CONTROL OF MATERIALS, PARTS AND COMPONENTS

8.1 PURPOSE/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.

8.2 DESCRIPTION

8.2.1 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.

8.2.2 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.

8.2.3 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~~IP~~ purchase order.

8.2.4 Material, parts, and components are identified and controlled during receipt and storage, fabrication, maintenance and modification activities performed at CPS. ~~The IP department responsible for supplier work at CPS is responsible for ensuring that identification and control of materials, parts, and components by the supplier are in accordance with applicable procedures.~~

8.3 RESPONSIBILITIES

8.3.1 Nuclear Program Departments

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

8.3.2 ~~CPS Plant Staff~~Maintenance

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

8.3.3. ~~Nuclear Training & Support~~Work Management

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

CHAPTER

9

CONTROL OF SPECIAL PROCESSES

9.1 PURPOSE/SCOPE

The purpose of this chapter is to define the requirements and responsibilities for assuring ~~that~~ 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.

9.2 DESCRIPTION

9.2.1 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.

9.2.2 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.

9.2.3 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.

9.2.4 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.

9.2.5 Inspections are conducted of special processes to ensure compliance with appropriate codes, standards, specifications, procedures, and the CPS~~IP Nuclear Program~~ Quality Assurance Manual.

9.3 RESPONSIBILITIES

9.3.1 ~~CPS Plant Staff~~Maintenance / Work Management

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 ~~Plant Staff~~ documents the requirement for special processes and their controls and references to the applicable codes or standards.

9.3.2 Nuclear Station Engineering

a. Specify special processes in technical documents and procurement requisitions.

b. Support CPS ~~Plant Staff~~ 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.

CHAPTER

10

INSPECTION

10.1 PURPOSE/SCOPE

The purpose of this chapter is to define the requirements and responsibilities for a program of inspection which provides assurance ~~that~~ 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.

10.2 DESCRIPTION

10.2.1 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, ~~will~~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.

10.3 RESPONSIBILITIES

10.3.1 ~~CPS Plant Staff~~ Maintenance

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

10.3.2 Nuclear Station 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 welding inspections to support plant operations.

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

10.3.3. Quality Assurance

a. Implement an inspection program for CPS.

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

10.3.4 ~~Nuclear Training & Support~~ Work Management

a. Implement a receipt inspection program for CPS.

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

CHAPTER

11

TEST CONTROL

11.1 PURPOSE/SCOPE

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

11.2 DESCRIPTION

11.2.1 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.

11.2.2 Test programs are developed to assure ~~that~~ 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.

11.2.3 Test schedules are provided and maintained in order to assure that necessary testing is performed and properly evaluated on a timely basis and ~~that~~ 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.

11.3 RESPONSIBILITIES

11.3.1 Nuclear Station Engineering

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

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

c. Ensure ~~that~~ 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.

11.3.2 CPS Plant Staff / Maintenance

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

b. Ensure ~~that~~ post-maintenance testing and surveillance tests are performed by qualified personnel with appropriate procedural guidance.

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

d. Review and approve post-maintenance test results.

CHAPTER

12

CONTROL OF MEASURING AND TEST EQUIPMENT

12.1 PURPOSE/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.

12.2 DESCRIPTION

12.2.1 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.

12.2.2 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 ~~that~~ 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 ~~that~~ recalibration is performed in accordance with pre-established calibration frequencies.

12.2.3 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~~IP Nuclear~~ 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.

12.3 RESPONSIBILITIES

12.3.1 ~~CPS Plant Staff~~ Maintenance

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

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

~~c. Ensure the appropriate requirements for the control of M&TE are included in Plant Staff initiated technical documents and procurement requisitions.~~

12.3.2 CPS Plant Staff

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

12.3.3 All Nuclear Program Personnel

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

CHAPTER

13

HANDLING, STORAGE AND SHIPPING

13.1 PURPOSE/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.

13.2 DESCRIPTION

13.2.1 The CPS~~IP~~ ~~Nuclear~~ 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~~IP~~ through appropriate technical and procurement documents, suppliers may also be required to provide information to Work Management~~Nuclear Support Services~~ related to the proper handling, storage and shipping of furnished materials, parts and components. Work Management~~Nuclear Support Services~~ uses this information for the development of the storage and handling procedures and instructions to be applied to an item.

13.2.2 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.

13.2.3 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.

13.3 RESPONSIBILITIES

13.3.1 Maintenance~~CPS Plant Staff~~

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

b. Implement programs to control the handling~~, storage and shipping~~ of materials.

13.3.2 Nuclear Station Engineering

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

b. 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.

13.3.3. ~~Nuclear Training & Support~~ Work Management

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

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

c. 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.

d. Ensure that appropriate handling, storage, and shipping requirements are identified in procurement requisitions.

CHAPTER

14

INSPECTION, TEST AND OPERATING STATUS

14.1 PURPOSE/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 ~~that~~ only items which have passed the required inspections and tests are installed or operated.

14.2 DESCRIPTION

14.2.1 The CPS~~IP Nuclear~~ 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 ~~documenting~~ documented evidence is not available, the associated equipment or materials must be considered nonconforming in accordance with Chapter 15 of the CPS~~Illinois Power Nuclear Program~~ Quality Assurance Manual. Until suitable documented evidence is available to show the equipment or material is in conformance, affected systems shall be considered ~~to be~~ 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.

14.2.2 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.

14.3 RESPONSIBILITIES

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

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

~~d~~c. Implement programs to indicate status of nonconforming items.

14.3.2 ~~Nuclear Training & Support~~ Work Management

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

14.3.3 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.

14.3.4 Nuclear Program departments

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

CHAPTER

15

NONCONFORMING MATERIALS, PARTS OR COMPONENTS

15.1 PURPOSE/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.

15.2 DESCRIPTION

15.2.1 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) "other" 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 reinspection 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.

15.2.2 Inservice 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.

15.2.3 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.

15.2.4 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.

15.2.5 The Manager - CPS~~Clinton Power Station~~ has the authority to conditionally release any item or installation for operation if needed to place the plant in a safe and stable condition.

15.3 RESPONSIBILITIES

15.3.1 All Nuclear Program Personnel

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

15.3.2 Nuclear Program Departments

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

~~15.3.3. CPS Plant Staff~~

~~a. Authorize the conditional release of items.~~

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

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

15.3.3 Maintenance

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

15.3.4 ~~Nuclear Training & Support~~Work Management

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

b. Authorize the conditional release of items.

15.3.5 Nuclear Station 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. Perform engineering evaluations for conditionally released items.

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.

15.3.6 Facility Review Group

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

15.3.7 All Nuclear Program Departments

a. Coordinate with NSED to evaluate and document the safety significance of nonconforming items.

CHAPTER

16

CORRECTIVE ACTION

16.1 PURPOSE/SCOPE

The purpose of this chapter is to describe the measures established and implemented to assure that conditions adverse to plant safety and/or quality are promptly identified and corrected; and that significant conditions are identified, evaluated, documented, corrected, reported and independently reviewed.

16.2 DESCRIPTION

16.2.1 Each CPS~~IP~~ organization and supplier performing activities or supplying services, materials, parts or components applicable to this program is required to establish and implement a documented corrective action procedure(s) which assures that conditions adverse to plant safety and/or quality are promptly identified, reported to supervisory personnel, analyzed for significance and corrected. Personnel or organizations identifying conditions adverse to plant safety and/or quality have the responsibility to report such conditions to the appropriate functional organization who will promptly correct the condition. Conditions adverse to plant safety shall~~will~~ be reported to Plant Operations personnel for assessment of operational impact. Reporting may be accomplished through various reporting documents as defined in procedures. An analysis of the significance of conditions adverse to plant safety and/or quality is performed by personnel cognizant of the condition and its resultant effects on plant safety or operability.

16.2.2 Trend analysis is performed on conditions adverse to plant safety and/or quality to determine if a trend representing significant condition adverse to plant safety and/or quality exists. Trend analysis of conditions documented on maintenance work documents to identify equipment failures and reliability concerns is also performed. The results of these trend analyses are documented and reported to appropriate management of the area in which the trends are identified. Reports to management include a history and analysis of the adverse conditions and trends identified.

16.2.3 In the case of significant conditions adverse to plant safety and/or quality, including significant adverse trends, the functional organization responsible for the significant condition shall~~will~~ analyze the condition for causes, take appropriate and timely action to preclude recurrence and implement follow-up action as appropriate to verify implementation of corrective action. The actions taken shall~~will~~ be documented and reported to appropriate levels of management.

16.2.4 Corrective action is evaluated to determine its effectiveness, including steps taken to identify the cause of significant conditions adverse to plant safety and/or quality and action taken to preclude recurrence. Documented corrective action for significant conditions adverse to plant safety is also reviewed. These reviews are documented and are carried out in accordance with a documented program.

16.3 RESPONSIBILITIES

16.3.1 All Nuclear Program Personnel

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

16.3.2 Nuclear Program 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.

16.3.3. CPS Plant Staff

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

~~16.3.4 Nuclear Safety & Performance Improvement Department~~

~~a~~b. Administer~~Implement~~ 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.

~~b. Conduct root cause analyses activities.~~

16.3.~~5~~4 Nuclear Review and Audit Group

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

CHAPTER

17

QUALITY ASSURANCE RECORDS

17.1 PURPOSE/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 the CPS~~Clinton Power Station~~.

17.2 DESCRIPTION

17.2.1 Measures shall be established to assure ~~that~~ 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.

17.2.2 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.

17.2.3 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~~IP~~ after the suppliers no longer plan to keep them.

17.2.4 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.

17.3 RESPONSIBILITIES

17.3.1 Nuclear Program Departments

a. Implement Records Management Standards for preparation, collection, review, acceptance, turnover/transfer, processing, transmittal, retention and retrieval of records.

b. Transfer completed quality assurance records to Nuclear Support ~~Services~~, Records Management Group for processing and retention.

17.3.2 Nuclear ~~Training &~~ Support

a. Establish, maintain and implement a Records Management Program including Standards 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.

CHAPTER

18

AUDITS

18.1 PURPOSE/SCOPE

The purpose of this chapter is to define the requirements and responsibilities for implementing the program of planned and periodic audits/assessments which verify compliance with quality assurance programs and determine effectiveness in meeting program objectives.

18.2 DESCRIPTION

18.2.1 CPS~~IP~~'s Quality Assurance program includes provisions for planned and periodic audits designed to verify compliance with the requirements of the CPS~~IP~~ ~~Nuclear~~ Quality Assurance Program and to determine the effectiveness in implementing the program objectives. The audit program provides for the following:

a. Provisions are made for both internal audits/assessments and external audits. For internal audits, the terms 'Audit' and 'Assessment' are synonymous.

b. Audits include the full range of activities within the scope of the CPS~~IP~~ ~~Nuclear~~ Quality Assurance Program. These audits shall encompass:

1. The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 24 months;

2. The performance, training and qualifications of unit staff at least once per 24 months;

3. The results of actions taken to correct deficiencies occurring in unit equipment, structures, systems, or method of operation that affect nuclear safety, at least once per 12 months;

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

5. The Emergency Plan and implementing procedures ~~at least once per 12 months~~;as necessary, based on an assessment against performance indicators, and as soon as reasonably practical after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect emergency preparedness, but no longer than 12 months after the change. In any case all elements of the emergency plan shall be audited at least once every 24 months.

6. The Security Plan and implementing procedures ~~at least once per 12 months~~; as necessary, based on an assessment against performance indicators, and as soon as reasonably practical after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect security, but no longer than 12 months after the change. In any case all elements of the security plan shall be audited at least once every 24 months.

7. Any other area of unit operation considered appropriate by the NRAG or the Vice President/Chief Nuclear Officer~~Vice President~~;

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

9. The fire protection equipment and program implementation shall be performed at least once per 12 months utilizing either qualified offsite licensee fire protection engineer(s) or an outside independent fire protection consultant;

10. An inspection and audit of the fire protection and loss prevention program shall be performed by an outside qualified fire consultant at intervals no greater than 36 months;

11. The radiological environmental monitoring program and the results thereof at least once per 24 months;

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

13. The PROCESS CONTROL PROGRAM and implementing procedures for solidification of radioactive wastes at least once per 24 months, and;

14. The performance of activities required by the Quality Assurance Program to meet the criteria of Regulatory Guide 4.15, Revision 1, February 1979~~December 1977~~, at least once per 24 months.

Additionally, program audits include interface between CPS~~IP~~ audited organizations and other affected organizations and USAR requirements.

c. Provisions are made for regularly scheduling audits based upon the status and importance of the activities.

d. A qualification system is established for auditing personnel. Independent certifying agencies may be used for the development and administration of lead auditor examinations.

e. Personnel conducting audits do not have any direct responsibilities for the activities being audited.

f. The audit team leader is charged with instructing the other audit team members during audit preparation and performance. Personnel conducting audits shall have training and/or experience with the activities being audited.

g. Written audit plans are developed which identify the scope, requirements, activities to be audited, organizations involved, applicable documents, schedule and written procedures or checklists to be used for each audit. Audit planning may credit reviews such as field observations~~assessments~~ or inspections performed by any~~non-Audits~~ section~~s~~ of the Quality Assurance Department when determining the scope and activities to be assessed by an audit.

h. Audit results are documented, reports are generated and retained.

i. Audit reports are distributed to responsible management of the auditing organization and to the appropriate managerial level of the organization having responsibility for the area or activity audited.

j. Appropriate corrective action is developed.

k. Follow-up action (including re-audit) is taken to verify that corrective action has been completed and the resolution properly documented when indicated.

18.2.2 Audits are initiated as early in the life of the activity as practical consistent with the schedule for accomplishing the activity to assure timely implementation of the quality assurance requirements. Audits may be augmented at any time based on recommendations from the Nuclear Review and Audit Group, or Nuclear Program personnel as the scope of work and other requirements for auditing an activity change.

18.2.3 Audited organizations are required to review and provide timely written response to audit findings stating corrective action taken or planned to correct deficient areas and prevent recurrence. Follow-up action to verify corrective action has been completed, and the resolution is properly documented, shall be taken when indicated. Audit program requirements are imposed on suppliers by appropriate contract or procurement documents.

18.2.4 Reports of internal audits are forwarded to the Nuclear Review and Audit Group and the Independent Safety Engineering Group for program evaluation. CPS~~IP~~ Management obtains independent audits of the Quality Assurance organization.

18.3 RESPONSIBILITIES

18.3.1 Nuclear Program Departments

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

18.3.2. Nuclear Review and Audit Group

a. Review reports of internal audits for program evaluation.

18.3.3 Quality Assurance

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

b. 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.

c. Coordinate for the Vice President/Chief Nuclear Officer~~Vice President~~, the performance of independent audits of the Quality Assurance organization.

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

18.3.4 Nuclear Safety & Performance Improvement Department

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

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 B 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~~Clinton Power Station~~ 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 manufacturer's published specifications or 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~~IP~~'s direct control and not within the CPS~~IP~~ organizational structure.

Facility Review Group (FRG) - An on-site committee whose function is to advise the Manager - CPS~~Clinton Power Station~~ on matters related to nuclear safety.

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.

Hardware Change - A plant design change that can include but is not limited to hardware, configured software or design document changes.

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~~IP~~'s Quality Assurance program activities retained under direct Company control and within the CPS~~IP~~ organizational structure.

IP - Abbreviation for Illinois Power.

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 Review and Audit Group (NRAG) - 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 Change - A change similar to that of a hardware change except that it does not impact the Design Bases, does not have major impacts and does not contain an unreviewed safety question.

Plant Staff - The organization which is directly responsible for the operation of CPS~~the Clinton Power Station~~. The Plant Staff includes operations, refueling, chemistry,~~technical, maintenance,~~ radiation protection, radwaste, and corrective action program administration~~support departments~~.

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~~IP Nuclear~~ 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~~Clinton Power Station~~ 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 Quality Assurance 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 - Quality Assurance.

Supplier - Any individual or organization that furnishes items or services to CPS~~IP~~ 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 ~~form~~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~~IP~~ 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.

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 ~~that~~ 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~~IP NUCLEAR PROGRAM~~ 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.

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 Manager - Quality Assurance 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, each and every employee 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.

M.T. Cook 11-19-99
for Vice President/Chief Nuclear Officer / Date

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 27, is given the following Departmental Concurrence Authorizations:

P. D. HINNENKAMP, MANAGER,
CLINTON POWER STATION

R. M. MOORE, MANAGER,
QUALITY ASSURANCE

V. J. GWIETNIEWICZ, DIRECTOR,
NUCLEAR TRAINING

W. B. CARSKY, ~~(Acting)~~ MANAGER,
NUCLEAR STATION ENGINEERING

G. L. BAKER, MANAGER,
NUCLEAR SUPPORT

R. F. PHARES, MANAGER,
NUCLEAR SAFETY & PERFORMANCE IMPROVEMENT

J. A. GOLDMAN, MANAGER
WORK MANAGEMENT

R. A. SCHENCK, MANAGER
MAINTENANCE

M. V. LUKOWSKI, DIRECTOR
PROJECTS/CONTRACTS

INTRODUCTION

Illinois Power Company (IP), as owner of Clinton Power Station (CPS), has ultimate responsibility for the quality assurance program which 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 three main sections which describe the purpose and scope of that chapter, a description of the quality program, and the division of responsibilities. The Quality Assurance 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 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.

CHAPTER

1

ORGANIZATION

1.1 PURPOSE/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 (SSCs) for the Clinton Power Station (CPS).

1.2 DESCRIPTION

1.2.1 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.

1.2.2 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.

1.2.3 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.

1.2.4 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 Manager - Quality Assurance has the authority to initiate a Stop Work Action. Upon the initiation of a Stop Work Action, the Manager - CPS has the authority and responsibility to place the plant in a safe and stable condition.

1.2.5 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.

Organizational Interfaces

1.2.6 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 Vice President/Chief Nuclear Officer as necessary to obtain resolution.

1.2.7 Selected work may be delegated to qualified outside organizations by Nuclear Program departments. The responsibility for exercising engineering control rests with Nuclear Station 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.

1.3 RESPONSIBILITIES

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

1.3.1 Vice President/Chief Nuclear Officer

The Vice President/Chief Nuclear Officer (CNO) reports to the Illinova Chief Executive Officer (CEO) and is responsible for accomplishing strategic objectives related to safety, economy, reliability, operation, and maintenance of CPS. The CNO is the corporate executive having responsibility for overall nuclear safety of CPS as identified in the Technical Specifications. The CNO is further responsible for nuclear quality control and assurance. He represents the Company before the NRC. The 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.

1.3.2 Assistant Vice President

The Assistant Vice President assists in the performance of the duties of the Vice President/Chief Nuclear Officer, with specific emphasis on plant recovery and outage completion activities. This position may participate on committees and in activities providing guidance to the site staff. In the absence of the Vice President/Chief Nuclear Officer, the Assistant Vice President may assume responsibilities of the office.

1.3.3 Manager - Clinton Power Station

The Manager - CPS reports to the Vice President/Chief Nuclear Officer and is responsible for the overall facility operation including the direction of the operation, refueling, chemistry, radiation protection, and radwaste 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 Manager - CPS also administers the Corrective Action Program (CAP) to assure conditions adverse to plant safety and/or quality are identified, evaluated, reported, corrected, reviewed and trended.

1.3.4 Manager - Nuclear Station Engineering

The Manager - Nuclear Station Engineering reports to the Vice President/Chief Nuclear Officer and is responsible for the development, direction and overall coordination of power plant engineering activities performed by the Nuclear Station Engineering Department (NSED) for the CPS. These responsibilities include: coordination of all interface with the Authorized Inspection Agency (AIA), and provisions for the establishment of Authorized Nuclear Inspector (ANI) hold or witness points and access to facilities and records. The Manager - NSED ensures these activities are performed in accordance with the requirements of the CPS Quality Assurance Program.

1.3.5 Manager - Nuclear Support

The Manager - Nuclear Support reports to the Vice President/Chief Nuclear Officer and is responsible for providing direction of access authorization, security, emergency preparedness, fitness for duty, facilities, records management, document control, industrial safety, controller, operation and management of telecommunications and information systems, and for corporate and plant integration in these functional support disciplines. The Manager - Nuclear Support ensures that these activities are performed in accordance with the requirements of CPS Quality Assurance Program.

1.3.6 Nuclear Review and Audit Group

The Nuclear Review and Audit Group (NRAG) reports to the Vice President/Chief Nuclear Officer and is responsible for the independent safety review function. The NRAG 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. The NRAG also has direct access to the Illinova CEO and the Board of Directors Nuclear Operations Committee.

1.3.7 Facility Review Group

The Facility Review Group (FRG) is an on-site committee whose function is to advise the Manager - CPS on matters related to nuclear safety.

1.3.8 Manager - Quality Assurance

The Manager - Quality Assurance reports to the Vice President/Chief Nuclear Officer and is responsible for Clinton Power Station's overall Quality Assurance Program. The Manager - Quality Assurance 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 the CPS. The Manager - Quality Assurance interfaces with the Nuclear Regulatory Commission, and the Authorized Inspection Agency for the Quality Assurance Program. The Manager - Quality Assurance 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.

1.3.9 Manager - Nuclear Safety & Performance Improvement (NSPI)

The Manager - Nuclear Safety & Performance Improvement Department reports to the Vice President/Chief Nuclear Officer and is responsible to ensure continued improvements in the plant's safety performance. This department is dedicated to the development, coordination, and monitoring of site-wide improvements to elevate identified programmatic weaknesses to management for timely corrective action. The Manager - NSPI is also responsible for maintaining the operating licenses and permits, the Updated Safety Analysis Report (USAR), the Environmental Report (ER) for continued programmatic compliance, and administers a tracking program for 10CFR21 items.

The Manager - NSPI ensures the Independent Safety Engineering Group (ISEG) review function is maintained separate and independent from line management.

The Manager - NSPI ensures these activities are performed in accordance with the requirements of the CPS Quality Assurance Program.

1.3.10 Manager - Maintenance

The Manager - Maintenance reports to the Vice President/Chief Nuclear Officer 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 Manager - Maintenance ensures that these activities are performed in accordance with the requirements of the CPS Quality Assurance Program.

1.3.11 Manager - Work Management

The Manager - Work Management reports to the Vice President/Chief Nuclear Officer and is responsible for overall performance of on-line and outage scheduling including approval of outage and on-line strategies and milestones. The Manager - Work Management is responsible for managing station material inventory, for selecting qualified suppliers, for preparing and issuing purchase orders and ensuring they include necessary technical, quality and commercial terms and conditions, and that appropriate reviews, are accomplished prior to release of a purchase order. The Manager - Work Management ensures that these activities are performed in accordance with the requirements of the CPS Quality Assurance Program.

1.3.12 Director - Nuclear Training

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

1.3.13 Director - Projects/Contracts

The Director - Projects/Contracts reports to the Vice President/Chief Nuclear Officer and is responsible for implementation of approved site modifications, projects, and management/administration of key service contracts. The Director -Projects/Contracts ensures that these activities are performed in accordance with the requirements of the CPS Quality Assurance Program.

CLINTON POWER STATION
QUALITY ASSURANCE MANUAL

CHAPTER

2

QUALITY ASSURANCE PROGRAM

2.1 PURPOSE/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.

2.2 DESCRIPTION

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

2.2.2 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 1.30, 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".

2.2.3 The Quality Assurance program description also includes the following sections of the CPS Operational Requirements Manual (ORM). The specific ORM sections are as follows:

- ORM Section 6.5, Review and Audit;
- ORM Section 6.8.2, Procedures and Programs - Review and Approval;
- ORM Section 6.8.3, Procedures and Programs - Temporary Changes and;
- ORM Section 6.10, Record Retention.

2.2.4 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).

2.2.5 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 recertifying, as determined by management or program commitment.

2.2.6 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/Chief Nuclear Officer. This review function consists of meetings with key Quality Assurance personnel, as well as review of 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. Independent audits of other organizations performing activities related to quality are accomplished regularly under the direction of the Manager - Quality Assurance.

2.3 RESPONSIBILITIES

2.3.1 Vice President/Chief Nuclear Officer

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

2.3.2 Nuclear Program 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.

2.3.3 CPS Plant Staff

a. Operate CPS in a safe and reliable mode .

2.3.4 Nuclear Station Engineering

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

b. Implement the Inservice Inspection Program.

2.3.5 Nuclear Support

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.

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

2.3.6 Quality Assurance

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.

2.3.7 Nuclear Training

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

2.3.8 Maintenance

a. Maintain CPS in a safe, and reliable mode.

2.3.9 Work Management

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

2.3.10 Projects/Contracts

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

CHAPTER

3

DESIGN CONTROL

3.1 PURPOSE/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.

3.2 DESCRIPTION

3.2.1 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 hardware changes are designed and implemented in accordance with applicable codes, standards and regulatory commitments.

3.2.2 NSED has overall responsibility for design control activities at CPS. These design control activities are managed within the context of the Nuclear Engineering Configuration Management Program, which also includes final design approval of hardware changes for incorporation into the plant. Processing of a hardware 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.

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

3.2.4 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 NSED or a qualified consultant-engineer is required to include the following considerations in the design of each hardware 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 an "unreviewed safety question".

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.

3.2.5 The organization which produces and approves the design/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 make 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.

3.2.6 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.

3.2.7 Design verification for the final design products will normally be done by an independent group or person within the organization actually producing the design. When this is a consultant-engineer organization, NSED may choose to conduct, or direct additional independent design verifications.

3.2.8 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.

3.2.9 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.

3.2.10 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.

3.3 RESPONSIBILITIES

3.3.1 CPS Plant Staff

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

b. Assure proposed design changes affecting nuclear safety and associated safety evaluations have been reviewed by the Facility Review Group.

3.3.2 Nuclear Station 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 the Licensing Department for updating the USAR to reflect current plant conditions.

e. Determine if the proposed design change involves an "unreviewed safety question".

f. Coordinate the processing of hardware 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.

3.3.3. Nuclear Safety & Performance Improvement

a. Review and evaluate Technical Specification changes and unreviewed safety questions identified during the hardware change process and obtain the necessary reviews and approvals.

3.3.4 Maintenance

a. Incorporate approved design changes into CPS.

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

CHAPTER

4

PROCUREMENT DOCUMENT CONTROL

4.1 PURPOSE/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.

4.2 DESCRIPTION

4.2.1 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.

4.2.2 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.

4.2.3 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.

4.2.4 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.

4.2.5 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.

4.3 RESPONSIBILITIES

4.3.1 Nuclear Program Departments

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

4.3.2 Work Management and Projects/Contracts

a. Review purchase requisitions for QA requirements.

b. Prepare procurement documents for award to qualified suppliers.

c. Review procurement documents for completeness.

4.3.3. Nuclear Station Engineering

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

b. Review and approve design changes that result from procurements.

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

4.3.4 Quality Assurance

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

CHAPTER

5

INSTRUCTIONS, PROCEDURES AND DRAWINGS

5.1 PURPOSE/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.

5.2 DESCRIPTION

5.2.1 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.

5.2.2 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.

5.3 RESPONSIBILITIES

5.3.1 Nuclear Program 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.

CHAPTER

6

DOCUMENT CONTROL

6.1 PURPOSE/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.

6.2 DESCRIPTION

6.2.1 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 which 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.

6.2.2 Documents such as parts lists, vendor manuals and written correspondence used in the design, operation, maintenance or testing are controlled in accordance with departmental procedures which 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.

6.2.3 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.

6.3 RESPONSIBILITIES

6.3.1 Nuclear Program Departments

a. Review, approve and maintain controlled documents generated in accordance with CPS Records Management Standards.

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

6.3.2 Nuclear Support

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.

CHAPTER

7

CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

7.1 PURPOSE/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.

7.2 DESCRIPTION

7.2.1 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.

7.2.2 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.

7.2.3 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.

7.2.4 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.

7.2.5 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. Source inspections at the supplier's facility are accomplished by qualified individuals 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.

7.2.6 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.

7.2.7 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.

7.2.8 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.

7.2.9 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.

7.3 RESPONSIBILITIES

7.3.1 Nuclear Program 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.

7.3.2 Nuclear Station Engineering

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

b. 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.

7.3.3. Work Management

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

b. Qualified inspectors perform required receipt inspection of materials or equipment prior to issuing the material or equipment for operation.

7.3.4 Work Management and Projects/Contracts

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

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

7.3.5 Quality Assurance

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.

CHAPTER

8

IDENTIFICATION AND CONTROL OF MATERIALS, PARTS AND COMPONENTS

8.1 PURPOSE/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 tractability is assured and the use of incorrect or defective items is prevented.

8.2 DESCRIPTION

8.2.1 Measures have been established which provide for the identification and control of materials, parts, and components to assure that tractability 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 tractability of materials, parts, or components to specific inspection or test records, the program is designed to provide such tractability.

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

8.2.2 Materials, parts, and components shall have appropriate identifying designation (such as serial number, part number, heat number, etc.) in order to provide tractability 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.

8.2.3 When installed material or equipment is removed for maintenance, repair, or modification, control measures are implemented to ensure proper identification and tractability 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.

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

8.3 RESPONSIBILITIES

8.3.1 Nuclear Program Departments

a. The Nuclear Program 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.

8.3.2 Maintenance

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

8.3.3. Work Management

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

CHAPTER

9

CONTROL OF SPECIAL PROCESSES

9.1 PURPOSE/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.

9.2 DESCRIPTION

9.2.1 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.

9.2.2 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.

9.2.3 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.

9.2.4 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.

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

9.3 RESPONSIBILITIES

9.3.1 Maintenance / Work Management

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.

9.3.2 Nuclear Station Engineering

a. Specify special processes in technical documents and procurement requisitions.

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.

CHAPTER

10

INSPECTION

10.1 PURPOSE/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.

10.2 DESCRIPTION

10.2.1 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.

10.3 RESPONSIBILITIES

10.3.1 Maintenance

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

10.3.2 Nuclear Station 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 welding inspections to support plant operations.

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

10.3.3 Quality Assurance

a. Implement an inspection program for CPS.

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

10.3.4 Work Management

a. Implement a receipt inspection program for CPS.

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

CHAPTER

11

TEST CONTROL

11.1 PURPOSE/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.

11.2 DESCRIPTION

11.2.1 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.

11.2.2 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.

11.2.3 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.

11.3 RESPONSIBILITIES

11.3.1 Nuclear Station 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.

11.3.2 CPS Plant Staff / Maintenance

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

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

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

d. Review and approve post-maintenance test results.

CHAPTER

12

CONTROL OF MEASURING AND TEST EQUIPMENT

12.1 PURPOSE/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.

12.2 DESCRIPTION

12.2.1 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.

12.2.2 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 recalibration is performed in accordance with pre-established calibration frequencies.

12.2.3 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.

12.3 RESPONSIBILITIES

12.3.1 Maintenance

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

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

12.3.2 CPS Plant Staff

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

12.3.3 All Nuclear Program Personnel

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

CHAPTER

13

HANDLING, STORAGE AND SHIPPING

13.1 PURPOSE/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.

13.2 DESCRIPTION

13.2.1 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.

13.2.2 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.

13.2.3 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.

13.3 RESPONSIBILITIES

13.3.1 Maintenance

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

b. Implement programs to control the handling of materials.

13.3.2 Nuclear Station Engineering

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

b. 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.

13.3.3 Work Management

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

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

c. 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.

d. Ensure that appropriate handling, storage, and shipping requirements are identified in procurement requisitions.

CHAPTER

14

INSPECTION, TEST AND OPERATING STATUS

14.1 PURPOSE/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.

14.2 DESCRIPTION

14.2.1 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.

14.2.2 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.

14.3 RESPONSIBILITIES

14.3.1 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.

14.3.2 Work Management

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

14.3.3 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.

14.3.4 Nuclear Program departments

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

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 reinspection 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.

15.2.2 Inservice 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.

15.2.3 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.

15.2.4 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.

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

15.3 RESPONSIBILITIES

15.3.1 All Nuclear Program Personnel

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

15.3.2 Nuclear Program Departments

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

15.3.3 Maintenance

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

15.3.4 Work Management

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

b. Authorize the conditional release of items.

15.3.5 Nuclear Station 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. Perform engineering evaluations for conditionally released items.

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.

15.3.6 Facility Review Group

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

15.3.7 All Nuclear Program Departments

a. Coordinate with NSED to evaluate and document the safety significance of nonconforming items.

CHAPTER

16

CORRECTIVE ACTION

16.1 PURPOSE/SCOPE

The purpose of this chapter is to describe the measures established and implemented to assure that conditions adverse to plant safety and/or quality are promptly identified and corrected; and that significant conditions are identified, evaluated, documented, corrected, reported and independently reviewed.

16.2 DESCRIPTION

16.2.1 Each CPS organization and supplier performing activities or supplying services, materials, parts or components applicable to this program is required to establish and implement a documented corrective action procedure(s) which assures that conditions adverse to plant safety and/or quality are promptly identified, reported to supervisory personnel, analyzed for significance and corrected. Personnel or organizations identifying conditions adverse to plant safety and/or quality have the responsibility to report such conditions to the appropriate functional organization who will promptly correct the condition. Conditions adverse to plant safety shall be reported to Plant Operations personnel for assessment of operational impact. Reporting may be accomplished through various reporting documents as defined in procedures. An analysis of the significance of conditions adverse to plant safety and/or quality is performed by personnel cognizant of the condition and its resultant effects on plant safety or operability.

16.2.2 Trend analysis is performed on conditions adverse to plant safety and/or quality to determine if a trend representing significant condition adverse to plant safety and/or quality exists. Trend analysis of conditions documented on maintenance work documents to identify equipment failures and reliability concerns is also performed. The results of these trend analyses are documented and reported to appropriate management of the area in which the trends are identified. Reports to management include a history and analysis of the adverse conditions and trends identified.

16.2.3 In the case of significant conditions adverse to plant safety and/or quality, including significant adverse trends, the functional organization responsible for the significant condition shall analyze the condition for causes, take appropriate and timely action to preclude recurrence and implement follow-up action as appropriate to verify implementation of corrective action. The actions taken shall be documented and reported to appropriate levels of management.

16.2.4 Corrective action is evaluated to determine its effectiveness, including steps taken to identify the cause of significant conditions adverse to plant safety and/or quality and action taken to preclude recurrence. Documented corrective action for significant conditions adverse to plant safety is also reviewed. These reviews are documented and are carried out in accordance with a documented program.

16.3 RESPONSIBILITIES

16.3.1 All Nuclear Program Personnel

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

16.3.2 Nuclear Program 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.

16.3.3. 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.

16.3.4 Nuclear Review and Audit Group

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

CHAPTER

17

QUALITY ASSURANCE RECORDS

17.1 PURPOSE/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.

17.2 DESCRIPTION

17.2.1 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.

17.2.2 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.

17.2.3 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.

17.2.4 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.

17.3 RESPONSIBILITIES

17.3.1 Nuclear Program Departments

a. Implement Records Management Standards for preparation, collection, review, acceptance, turnover/transfer, processing, transmittal, retention and retrieval of records.

b. Transfer completed quality assurance records to Nuclear Support, Records Management Group for processing and retention.

17.3.2 Nuclear Support

a. Establish, maintain and implement a Records Management Program including Standards 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.

CHAPTER

18

AUDITS

18.1 PURPOSE/SCOPE

The purpose of this chapter is to define the requirements and responsibilities for implementing the program of planned and periodic audits/assessments which verify compliance with quality assurance programs and determine effectiveness in meeting program objectives.

18.2 DESCRIPTION

18.2.1 CPS's Quality Assurance program includes provisions for planned and periodic audits designed to verify compliance with the requirements of the CPS Quality Assurance Program and to determine the effectiveness in implementing the program objectives. The audit program provides for the following:

a. Provisions are made for both internal audits/assessments and external audits. For internal audits, the terms 'Audit' and 'Assessment' are synonymous.

b. Audits include the full range of activities within the scope of the CPS Quality Assurance Program. These audits shall encompass:

1. The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 24 months;

2. The performance, training and qualifications of unit staff at least once per 24 months;

3. The results of actions taken to correct deficiencies occurring in unit equipment, structures, systems, or method of operation that affect nuclear safety, at least once per 12 months;

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

5. The Emergency Plan and implementing procedures as necessary, based on an assessment against performance indicators, and as soon as reasonably practical after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect emergency preparedness, but no longer than 12 months after the change. In any case all elements of the emergency plan shall be audited at least once every 24 months.

6. The Security Plan and implementing procedures as necessary, based on an assessment against performance indicators, and as soon as reasonably practical after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect security, but no longer than 12 months after the change. In any case all elements of the security plan shall be audited at least once every 24 months.

7. Any other area of unit operation considered appropriate by the NRAG or the Vice President/Chief Nuclear Officer;

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

9. The fire protection equipment and program implementation shall be performed at least once per 12 months utilizing either qualified offsite licensee fire protection engineer(s) or an outside independent fire protection consultant;

10. An inspection and audit of the fire protection and loss prevention program shall be performed by an outside qualified fire consultant at intervals no greater than 36 months;

11. The radiological environmental monitoring program and the results thereof at least once per 24 months;

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

13. The PROCESS CONTROL PROGRAM and implementing procedures for solidification of radioactive wastes at least once per 24 months, and;

14. The performance of activities required by the Quality Assurance Program to meet the criteria of Regulatory Guide 4.15, Revision 1, February 1979, at least once per 24 months.

Additionally, program audits include interface between CPS audited organizations and other affected organizations and USAR requirements.

c. Provisions are made for regularly scheduling audits based upon the status and importance of the activities.

d. A qualification system is established for auditing personnel. Independent certifying agencies may be used for the development and administration of lead auditor examinations.

e. Personnel conducting audits do not have any direct responsibilities for the activities being audited.

f. The audit team leader is charged with instructing the other audit team members during audit preparation and performance. Personnel conducting audits shall have training and/or experience with the activities being audited.

g. Written audit plans are developed which identify the scope, requirements, activities to be audited, organizations involved, applicable documents, schedule and written procedures or checklists to be used for each audit. Audit planning may credit reviews such as field observations or inspections performed by any section of the Quality Assurance Department when determining the scope and activities to be assessed by an audit.

h. Audit results are documented, reports are generated and retained.

i. Audit reports are distributed to responsible management of the auditing organization and to the appropriate managerial level of the organization having responsibility for the area or activity audited.

j. Appropriate corrective action is developed.

k. Follow-up action (including re-audit) is taken to verify that corrective action has been completed and the resolution properly documented when indicated.

18.2.2 Audits are initiated as early in the life of the activity as practical consistent with the schedule for accomplishing the activity to assure timely implementation of the quality assurance requirements. Audits may be augmented at any time based on recommendations from the Nuclear Review and Audit Group, or Nuclear Program personnel as the scope of work and other requirements for auditing an activity change.

18.2.3 Audited organizations are required to review and provide timely written response to audit findings stating corrective action taken or planned to correct deficient areas and prevent recurrence. Follow-up action to verify corrective action has been completed, and the resolution is properly documented, shall be taken when indicated. Audit program requirements are imposed on suppliers by appropriate contract or procurement documents.

18.2.4 Reports of internal audits are forwarded to the Nuclear Review and Audit Group and the Independent Safety Engineering Group for program evaluation. CPS Management obtains independent audits of the Quality Assurance organization.

18.3 RESPONSIBILITIES

18.3.1 Nuclear Program Departments

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

18.3.2. Nuclear Review and Audit Group

a. Review reports of internal audits for program evaluation.

18.3.3 Quality Assurance

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. 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.

c. Coordinate for the Vice President/Chief Nuclear Officer, the performance of independent audits of the Quality Assurance organization.

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

18.3.4 Nuclear Safety & Performance Improvement Department

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

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 B 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 manufacturer's published specifications or 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 tractability 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.

Facility Review Group (FRG) - An on-site committee whose function is to advise the Manager - CPS on matters related to nuclear safety.

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.

Hardware Change - A plant design change that can include but is not limited to hardware, configured software or design document changes.

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.

IP - Abbreviation for Illinois Power.

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 Review and Audit Group (NRAG) - 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 Change - A change similar to that of a hardware change except that it does not impact the Design Bases, does not have major impacts and does not contain an unreviewed safety question.

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.

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 Quality Assurance 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 - Quality Assurance.

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.

Tractability - 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.

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 27 MATRIX OF CHANGES

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
		Authorization		
all	various	changed the Manual title from the "Illinois Power Nuclear Program Quality Assurance Manual" to the "Clinton Power Station Quality Assurance Manual"	Change	This change has been accomplished globally in the manual and will not be addressed again in the change matrix. This change is being made to reflect that the Quality Assurance (QA) Manual (QAM) and Program apply specifically to Clinton Power Station (CPS) which is the only nuclear station in the Nuclear Program. This change does not reduce commitments or the effectiveness of QA functions.
all	various	use the acronym "CPS", for Clinton Power Station, Illinois Power, IP Nuclear, Illinois Power Nuclear, Plant Staff, and IP	Editorial	This change has been accomplished globally in the manual and will not be addressed again in the change matrix; this is an editorial change to improve clarity.
i	first, second, fourth	change "satisfactory" to "satisfactorily" in the first paragraph; added plurals for "meet and exceed" in the second paragraph; and capitalized "manual" in the fourth paragraph	Editorial	These are editorial changes to correct grammar and improve sentence structure.
all	various	changed title from Vice President to Vice President/Chief Nuclear Officer	Change	This is a position title change that has no impact on program implementation. The position of the Vice President has been replaced by the new position of the Vice President/Chief Nuclear Officer (VP/CNO). In addition, all duties and responsibilities previously assigned to the Senior Vice President-Energy Supply have also been assumed by the VP/CNO. The Senior Vice President-Energy Supply position has been eliminated. The title change, to VP/CNO, is in agreement with Updated Safety Analysis Report (USAR) paragraph 13.1.2.1. The VP/CNO reports directly to the Illinova Chief Executive Officer (CEO). The position's responsibilities and authority are amended for clarity. The change does not constitute a reduction in commitment per 10CFR50.54(a); the change results in the new position reporting to the same or a higher level of management. Authority and independence remain the same. This change has been accomplished globally in the manual and will not be addressed again in the change matrix.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 27 MATRIX OF CHANGES

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
		Concurrence Authorization		
ii		amended page ii to reflect current CPS management	Change	This page was added in the previous Manual revision, Revision 26, to indicate CPS managers' concurrence of the Manual revision and has been updated to reflect current management organization. This is not a reduction in commitment per 10CFR50.54(a). Organizational changes necessitating the revision of this page are addressed in the Chapter 1 portion of this matrix.
		Table of contents.		
iii	all	added the word "page" in 6 places and corrected the page numbers	Editorial	This is an editorial change. Added "page" to the column and header to accurately depict the table of contents.
		Introduction		
iv	1st	correct titles for 10CFR50 Appendix B and 10CFR71 Subpart H	Editorial	This is an editorial change to correct the spelling of the regulatory titles.
iv	all	capitalized "manual" in four places	Editorial	This is an editorial change to correct grammar.
iv	3rd	replaced "broken down" with "divided"; replaced "approves" with "identifies"	Editorial	This is an editorial clarification to improve understanding . The intent and meaning are not changed.
	Chapter 1	**Organization**		
1	1.1	replaced "or" with "and"; added the acronym "SSCs"	Editorial	This is an editorial change for clarification.
1	1.2.4	add "and responsibility" to the final sentence	Editorial	This is an editorial change to add amplifying information for clarification; the intent and meaning have not been changed.
1	1.2.4	added hyphen to "safety related"	Editorial	This is an editorial change to correct spelling.
1	1.2.4	delete "The" from the final sentence	Editorial	This is an editorial change to correct grammar and sentence structure.
2	1.2.5	rewrote second sentence, capitalized "during", omitted parentheses	Editorial	This is an editorial change to correct grammar and improve sentence structure.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 27 MATRIX OF CHANGES

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
2	1.2.5	changed "shift supervisor" title to "shift manager"	Change	This title change reflects a change made to the CPS USAR, from shift supervisor to shift manager. Both positions meet the same ANSI ANS 3.1-1978 requirements. This is not a reduction in commitment per 10CFR50.54(a). Duties do not change; shift managers are in charge of and responsible for CPS plant operations. No changes in reporting levels, authority or independence resulted from this change.
2	1.2.5	delete "inspection" in 2 places delete comma in the same sentence	Editorial	This corrects a clerical error and grammar. The term "inspection points" was deleted in Revision 26 of the Quality Assurance Manual (QAM). Revision 26 should have also removed the term "inspection" from this sentence.
2	1.2.6	change "these" to "the", deleted "that"	Editorial	This is an editorial change to correct grammar.
2	1.2.6 1.3.1	change title from "Senior Vice President-Energy Supply" to "Vice President/Chief Nuclear Officer"	Change	The Senior VP position is eliminated and responsibilities/authorities are reassigned to the VP/CNO. The VP/CNO, like the Senior VP, reports to the CEO. Reporting levels and authority are not changed. The explanation/justification for the title change is provided in conjunction with the change on page i.
2	1.2.7	deleted first sentence	Editorial	This is a change for clarity. The deleted sentence is a redundant statement; the second sentence stipulates the necessary requirement pertaining to delegation. This change does not change the intent or meaning.
2	1.3	delete, "within IP"	Editorial	This is a change for clarity.
2	1.3	capitalize "quality assurance program"	Editorial	This is an editorial change to correct grammar.
3	1.3.2	added new position, "Assistant Vice President"	Change	The purpose of adding this position is to provide assistance to the VP/CNO. Core functions and responsibilities of the VP/CNO are not affected. The VP/CNO maintains overall responsibility for plant nuclear safety. Lines of authority or control are not affected by the addition of this position. This is not a reduction in commitment per 10CFR50.54(a). Addition of the new position Assistant Vice President does not affect authority, independence, or management reporting levels. This new position reports directly to the VP/CNO, and does not affect any other organization's reporting relationship.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 27 MATRIX OF CHANGES

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
3	1.3.3	amended Manager - CPS responsibilities	Change	This change updates the Manager-CPS responsibilities. This change adds the responsibility for the Corrective Action Program administration which was previously the responsibility of the Manager - Nuclear Safety & Performance Improvement (NSPI). The transfer of responsibility for the corrective action function does not constitute a reduction in commitment because the responsibility is discharged by the same level of management and with the same level of authority. Responsibilities for Maintenance activities have been transferred to the new position, Manager-Maintenance. The transfer of responsibility for maintenance does not constitute a reduction in commitment because the responsibility is discharged by the same level of management and with the same level of authority. The responsibility for outage coordination, and work planning/scheduling were transferred to the new position, Manager-Work Management. The transfer of this function does not constitute a reduction in commitment because the responsibility is discharged by the same level of management and with the same level of authority. This change also provides amplifying information to more precisely describe activities for which the Manager-CPS is responsible.
3	1.3.4	omitted "that"	Editorial	This is an editorial change to improve sentence structure.
3	1.3.5	change position title from "Manager - Nuclear Training and Support" to "Manager - Nuclear Support" and amended responsibilities	Change	This change amends the position responsibilities based on CPS organizational changes and amends the position title. The responsibility of management of nuclear training has been transferred to the new position Director-Nuclear Training as described in paragraph 1.3.12. Material support, receiving, and warehousing responsibilities have been transferred to the new position of the Manager - Work Management, as described in paragraph 1.3.11. The transfer of responsibility for training, material support, warehousing and receiving does not constitute a reduction in commitment because all duties and responsibilities for training and for material management are discharged by the same level of management and with the same level of authority. Amplifying information was added to clarify the positions' existing responsibilities.

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
4	1.3.6	add, "The NRAG also has direct access to the Illinova CEO and the Board of Directors Nuclear Operations Committee."	Change	This is a clarification to add amplifying information concerning the groups functional reporting responsibilities. This addition of information does not represent a change in the level of the reporting function for NRAG. This does not constitute a reduction in commitment.
4	1.3.8	add "of monitoring, assessments, inspections, and independent oversight of all areas"	Change	This change adds amplifying information to clarify the position's existing responsibilities. This addition of information does not represent a change in the duties of the Manager - QA. This does not constitute a reduction in commitment.
4	1.3.9	amend Manager - NSPI responsibilities, deleted 3rd paragraph	Change	This change transfers management responsibility of the Corrective Action Program administration to the Manager - CPS. See the explanation/justification associated with paragraph 1.3.3.
4	1.3.9	delete bold type; eliminate word "that" in 2 places; Change "department" to "Manager - NSPI"; add "is also responsible for"; delete the word "manages" (twice); delete "while continuing to safely operate the Clinton Power Station"	Editorial	These are editorial changes to correct clerical errors, clarify and improve sentence structure, and to clarify the Manager - NSPI's responsibilities.

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
5	1.3.10	deleted position of "Manager - Purchasing and Material Control", added new position of; "Manager-Maintenance"	Change	The Manager - Purchasing and Material Control position, which was a corporate function, has been eliminated. These responsibilities are now accomplished by the Manager - Work Management; see paragraph 1.3.11 for justification. Deletion of reference to the Manager - Purchasing and Material Management and transfer of responsibilities to the Manager - Work Management does not affect authority or independence. This transfers an activity and reporting function from an off-site organization to Work Management, an onsite organization at CPS. The Manager - Purchasing and Material Management reported to the off-site Senior Vice President of the Support Services Business Group (at Headquarters); the Manager - Work Management reports to the CPS VP/CNO. There is no change in reporting level since the VP/CNO position reports to the CEO as did the Senior Vice President Support Business Services Business Group. Therefore, this does not constitute a reduction in commitment. The Manager - Maintenance is a new management position whose sole responsibility is station maintenance. These responsibilities are being transferred from the Manager-CPS to this new position to unburden the Manager-CPS. The transfer of this function does not constitute a reduction in commitment because the responsibility is discharged by the same level of management and with the same authority. See also paragraph 1.3.3.
5	1.3.11	added new position of "Manager - Work Management"	Change	This is a new management position whose responsibilities are outage coordination, material management, and work planning/scheduling activities. The material management responsibilities were previously assigned to the Manager - Purchasing and Material Control and the Manager - Nuclear Training & Support. The work planning/scheduling and outage coordination functions were previously the responsibility of the Manager - CPS. This position was established to unburden the Manager - CPS. The transfer of these functions does not constitute a reduction in commitment because the responsibility is discharged by the same level of management and with the same authority. See also paragraphs 1.3.3 and 1.3.5.

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
5	1.3.12	added new position of "Director-Nuclear Training"	Change	This is a new position that is responsible for Nuclear Training. This responsibility was previously the responsibility of the Manager - Nuclear Training & Support, which changed to Manager - Nuclear Support; as described in paragraph 1.3.5. CPS was originally licensed with separate departments described in the FSAR Amendment 38, figure 13.1-1A. CPS has previously had separate departments for training and support, and the USAR has previously reflected that arrangement. This is not a reduction in commitment; all duties associated with training were transferred to a position with the same level of management reporting. This position reports directly to the VP/CNO as did the previous position of Manager - Nuclear Training & Support.
5	1.3.13	added new position of "Director - Projects/Contracts"	Change	This is a new position to establish a focal point for plant modifications and project implementation. These activities are controlled by CPS procedures and the activity itself does not change. This position reports directly to the VP/CNO. This is not a reduction in commitment in that the activity, controls, and reporting levels are not changed.
	Chapter 2	**Quality Assurance Program**		
1	2.1	added "how" to first sentence	Editorial	This is an editorial change that adds amplifying information for clarity.
1	2.2.1	omitted "a", correct plurals, deleted "or", added "and". Corrected capitalization of "Quality Control" to "quality control"	Editorial	These are editorial changes for clarity and to correct grammar.
1	2.2.2	correct title of 10CFR71, Subpart H	Editorial	This is an editorial change to correct the regulatory title.
2	2.2.3	deleted second sentence pertaining to the ORM	Editorial	This is an editorial change that omits unnecessary historical information. This information was added previously for clarification of the transition; it is now unnecessary.
2	2.2.4	rewrote first sentence	Editorial	This is an editorial change to improve understanding and for clarity.
3	2.2.5	omitted "that", "are" and "that they"	Editorial	This is an editorial change for clarity.
3	2.2.6	changed "an" to "a"	Editorial	This is an editorial change correct grammar.

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
3	2.3.3	deleted "and maintain", "and efficient", and "of operation"	Change	This change eliminates verbose and obscure wording for clarity. "And maintain" suggests a responsibility for plant maintenance that is the responsibility of Maintenance as described in paragraph 1.3.10. "Of operation" is redundant. To operate efficiently, although an operational objective, is not a quality assurance objective and is being eliminated. Therefore, these changes are not reductions in commitments.
4	2.3.4b	added responsibly to implement the Inservice Inspection (ISI) Program	Change	This change adds amplifying information. The detail added to the responsibilities of the Manager - NSED was accomplished to provide more precise information and does not reassign any duties or reduce any commitments.
4	2.3.5	amend title, change "Nuclear Training & Support" to "Nuclear Support"	Change	This change reflects the position title change in paragraph 1.3.5.
4	2.3.5a	deleted responsibility, and renumbered paragraphs b & c	Change	This change deletes a responsibility that has been transferred to Nuclear Training in paragraphs 1.3.12 and 2.3.7.
4	2.3.7	added new paragraph for Nuclear Training responsibility	Change	This change adds amplifying information. This change reflects the transfer of responsibilities for training from the Manager-Nuclear Training and Support, in paragraph 2.3.5, to the new position of Director-Nuclear Training, as described in paragraph 1.3.12. Maintenance and Technical Training are included in INPO accredited programs therefore this change does not reduce commitments.
4	2.3.8	added new paragraph for Maintenance responsibilities	Change	This change describes the responsibility associated with establishing the Maintenance Department as described in paragraphs 1.3.3 and 1.3.10.
4	2.3.9	added new paragraph for Work Management responsibilities	Change	This change describes the responsibility associated with establishing the Work Management Department as described in paragraphs 1.3.3 and 1.3.11.
4	2.3.10	added new paragraph for Projects/Contacts responsibilities	Change	This change describes the responsibilities associated with establishing the Projects/Contacts Department as described in paragraph 1.3.13.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 27 MATRIX OF CHANGES

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
	Chapter 3	**Design Control**		
all	3.1	omit "that"	Editorial	This change has been accomplished globally in the manual and will not be addressed again in the change matrix; this is an editorial change to improve clarity.
all	3.2.2	use "NSED" acronym	Editorial	This change has been accomplished globally in the manual and will not be addressed again in the change matrix; this is an editorial change to improve clarity.
3	3.2.6	added comma after vary	Editorial	This is an editorial change to correct punctuation.
3	3.2.7	omit comma after direct	Editorial	This is an editorial change to correct punctuation.
3	3.2.9	omit "its"; add "a"	Editorial	This is an editorial change for clarity.
3	3.3.1	omitted paragraphs b and c, renumbered paragraph d to b	Change	This change transfers these responsibilities from the CPS Plant Staff to Maintenance. See paragraphs 1.3.3 and 1.3.10, for additional explanation/justification. These responsibilities are added to new paragraph 3.3.4.
3	3.3.1b	changed "evaluation" to "evaluations"; delete "that the"; changed "has" to "have", changed "change" to "changes"	Editorial	These are editorial changes to correct grammar.
4	3.3.2d	added "reflect"	Editorial	This is an editorial change that adds amplifying information for clarity.
4	3.3.2f	deleted "Services"	Editorial	This change corrects an editing error and amends the title from Nuclear Support Services to Nuclear Support. The title Nuclear Support Services was eliminated in Revision 26 of this Manual but not corrected due to an oversight.
4	3.3.4, 3.3.4a, 3.3.4b	added CPS Maintenance responsibilities, in b, add "prevent unauthorized changes to" and omit "maintain"	Change	This change reflects the new management position whose sole responsibility is station maintenance. These responsibilities are being transferred from CPS Plant Staff to Maintenance. See paragraphs 1.3.3 and 1.3.10, for additional explanation/justification. Paragraph 3.3.4b is revised for clarity.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 27 MATRIX OF CHANGES

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
	Chapter 4	**Procurement Document Control**		
2	4.2.4	change "evaluations" to "evaluation"	Editorial	This is an editorial change for clarity.
2	4.3.2	delete "Nuclear Training & Support" responsibilities; change "Purchasing and Material Control" to "Work Management and Projects/Contracts", add 4.3.2a, and renumbered paragraphs	Change	This Nuclear Training & Support responsibility has been transferred to Work Management, see paragraph 1.3.5 and new paragraph 4.3.2a. The Purchasing and Material Control organization has been eliminated from CPS; these responsibilities are now accomplished by Work Management and Projects/Contracts, see paragraphs 1.3.11 and 1.3.13 for justification.
	Chapter 5	**Instructions, Procedures & Drawing**		
1	5.3.1a	add comma	Editorial	This is an editorial change to correct grammar.
	Chapter 6	**Document Control**		
2	6.3.2	change "Nuclear Training & Support" to "Nuclear Support"	Change	This change amends the title from Nuclear Training & Support to Nuclear Support as explained/justified in paragraph 1.3.5.
	Chapter 7	**Control of Purchased Material, Equipment and Services**		
1	7.2.3	change "indicates" to "indicate"	Editorial	This is an editorial change to correct grammar.
2	7.2.6	omit "inspection"	Editorial	This is an editorial change to improve understanding. That "...inspection personnel are responsible for inspecting..." is a redundant statement and is amended for clarity.
3	7.3.1b	change "CPS Plant Staff" to "CPS programs"	Change	This change expands responsibility for this activity to new departments as a result of the organizational changes described in paragraph 1.3.3.
3	7.3.3	change "Nuclear Training & Support" to "Work Management"	Change	This change in responsibility is a result of the organization change described in paragraph 1.3.5.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 27 MATRIX OF CHANGES

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
3	7.3.3a	omit "the" and "of"	Editorial	This is an editorial change for clarity.
3	7.3.4	change responsibility from "Purchasing and Material Control" to "Work Management" and "Projects/Contracts"	Change	The Purchasing and Material Control organization has been eliminated from CPS and the responsibilities assigned to Work Management and Projects/Contracts. This is the result of the organizational changes described in paragraphs 1.3.10, 1.3.11, and 1.3.13.
3	7.3.5b	change "survillances" to "surveillances"	Editorial	This is an editorial change to correct a misspelled word.
	Chapter 8	**Identification and Control of Materials, Parts and Components**		
2	8.2.4	eliminate redundant sentence	Editorial	This is an editorial change. This is a redundant statement that is repeated in paragraph 8.3.1a. This sentence is being omitted to eliminate the redundancy that is of no benefit.
2	8.3.1a	added a comma after parts	Editorial	This is an editorial change for clarity and to correct grammar.
2	8.3.2	change from "CPS Plant Staff" to "Maintenance"	Change	This change is a result of the organization change and creation of the Maintenance Department as described in paragraphs 1.3.3 and 1.3.10.
2	8.3.3	change from "Nuclear Training & Support" to "Work Management"	Change	This responsibility change is a result of the organization change as described in paragraphs 1.3.5 and 1.3.11.
	Chapter 9	**Control Of Special Processes**		
2	9.3.1	change from "CPS Plant Staff" to "Maintenance" and "Work Management"	Change	This change is a result of the organization changes and creation of new departments (Maintenance and Work Management) as described in paragraphs 1.3.3, 1.3.10 and 1.3.11.
2	9.3.1c	change "Plant Staff" to "CPS"	Change	This change expands responsibility for this activity to new departments as a result of the organizational changes described in paragraph 1.3.3.

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
3	9.3.2b	change "Plant Staff" to "CPS"	Change	This change expands the responsibility for this activity to new departments as a result of the organizational changes described in paragraph 1.3.3.
	Chapter 10	**Inspection**		
1	10.2.1 b.1	change "will" to "shall"	Editorial	This is an editorial change to improve understanding and for consistency.
2	10.3.1	change "CPS Plant Staff" to "Maintenance"	Change	This change is a result of the organization change and creation of the Maintenance Department as described in paragraphs 1.3.3 and 1.3.10.
2	10.3.4	change " Nuclear Training & Support" to "Work Management"	Change	This responsibility change is a result of the organization change as described in paragraph 1.3.5 and 1.3.11.
	Chapter 11	**Test Control**		
2	11.3.2	add "Maintenance"	Change	This change is a result of the organization change and creation of the Maintenance Department as described in paragraphs 1.3.3 and 1.3.10.
	Chapter 12	**Control of Measuring and Test Equipment**		
3	12.3.1	change "CPS Plant Staff" to "Maintenance"	Change	This change is a result of the organization change and creation of the Maintenance Department as described in paragraphs 1.3.3 and 1.3.10.
3	12.3.3	transfer responsibility from paragraph 12.3.1c "CPS Plant Staff" to "All Nuclear Program Personnel" in new paragraph 12.3.3	Change	This change expands responsibility for this activity to new departments as a result of the organizational changes described in paragraph 1.3.3.
3	12.3.2a	renumbered paragraph 12.3.1d to new paragraph 12.3.2	Editorial	This is an editorial change to renumber this paragraph. This responsibility remains with the new CPS Plant Staff organization.

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REVISION 27 MATRIX OF CHANGES

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
	Chapter 13	**Handling, Storage and Shipping**		
1	13.2.1	change "Nuclear Support Services" to "Work Management" in two places	Change	This change is a result of the organization changes described in paragraphs 1.3.5 and 1.3.11.
1	13.3.1	change from "CPS Plant Staff" to "Maintenance"	Change	This change is a result of the organization change and creation of the Maintenance Department as described in paragraphs 1.3.3 and 1.3.10.
1	13.3.1.b	omit ", storage and shipping"	Change	Storage and shipping are the responsibility of Work Management and are described in paragraph 13.3.3b.
2	13.3.2.b	add "including requisitions"	Editorial	This is a clarification to add amplifying information that procurement documents include requisitions, as specified in paragraph 7.3.2a.
2	13.3.3	change "Nuclear Training & Support" to "Work Management"	Change	This responsibility change is a result of the organization change as described in paragraph 1.3.5 and 1.3.11.
	Chapter 14	**Inspection, Test and Operating Status**		
1	14.2.1.b	change "documenting" to "documented", omit "to be"	Editorial	These are editorial changes to improve understanding and for clarity.
2	14.3.1 14.3.4 14.3.4a	omit paragraph b, and transferred responsibility to all Nuclear Programs, see new paragraph 14.3.4a; renumber 14.3.1c and 14.3.1d	Change	This change expands responsibility for this activity to new departments as a result of the organizational changes described in paragraph 1.3.3.

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
2	14.3.2	change "Nuclear Training & Support" to "Work Management"	Change	This responsibility change is a result of the organization change as described in paragraph 1.3.5 and 1.3.11.
2	14.3.3 14.3.3a	add new paragraph "Maintenance" and responsibility	Change	This change is a result of the organization change and creation of the Maintenance Department as described in paragraphs 1.3.3 and 1.3.10.
	Chapter 15	**Nonconforming Materials, Parts or Components**		
3	15.3.3 15.3.3.a, 15.3.3.b, 15.3.3.c 15.3.4 15.3.4.b 15.3.7 15.3.7a	delete "Plant Staff" responsibilities and transfer to "Maintenance", "Work Management" and "All Nuclear Program Departments" change "Nuclear Training & Support" to "Work Management; add new paragraph 15.3.7	Change	These Plant Staff responsibilities have been transferred to Maintenance (15.3.3a), Work Management (15.3.4b), and all Nuclear Program Departments (15.3.7a). This change reassigns the responsibility for these activities to the new departments and existing departments as a result of the organizational changes described in paragraphs 1.3.3, 1.3.5, 1.3.10, and 1.3.11. The paragraph 15.3.7 change reassigns the responsibility for all nuclear program departments to coordinate with NSED for the evaluation of nonconforming items. This was previously the responsibility of CPS Plant Staff in 15.3.3b. This clarifies that all CPS departments are responsible for this activity. Previous QAM revisions implied that this responsibility was limited to Plant Staff when in practice it was applicable to all departments.
	Chapter 16	**Corrective Action**		
1	16.2.1	change "will" to "shall"	Editorial	This is an editorial change for clarity and consistency.
1	16.2.3	change "will" to "shall" in two places	Editorial	This is an editorial change for clarity and consistency.
2	16.3.3 16.3.4 16.3.5	deleted NSPI, transferred paragraph 16.3.4a responsibility to CPS Plant Staff; and renumbered paragraph 16.3.4	Change	The responsibility for the Corrective Action Program administration has been transferred from NSPI to CPS Plant Staff, as a result of the organizational changes described in paragraph 1.3.3 and 1.3.9.

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
2	16.3.3b 16.3.4b	change "Implement" to Administer"; delete entire paragraph 16.3.4b	Editorial	This wording change corrects a redundancy. All nuclear program personnel are responsible for implementing the CAP, as stipulated in paragraph 16.3.2a. This change clarifies which organization actually administers the CAP. Paragraph 16.3.2a stipulates that all Nuclear Program departments are responsible for cause analysis for significant conditions. The statement in paragraph 16.3.4b is redundant and is eliminated.
	Chapter 17	**Quality Assurance Records**		
2	17.3.2	change "Nuclear Training & Support" to "Nuclear Support"	Change	This change reflects department title change as described in paragraph 1.3.5.
2	17.3.1.b	delete "Services"	Editorial	This change corrects an editing error and amends the title from Nuclear Support Services to Nuclear Support. The title Nuclear Support Services was eliminated in Revision 26 of this Manual but not corrected due to an oversight.
	Chapter 18	**Audits**		
1	18.1	add "assessments"	Change	CPS has modified the audit process to smaller scope assessments that are performed over the audit frequency period. Independence and authority are not affected by this change and no commitments have changed. Audits/assessments are both performed in accordance with all the requirements of ANSI N45.2.12.
1	18.2.1a	add "audits/assessments" and new sentence	Change	This is a change that is explained/justified in paragraph 18.1.
1	18.2.1b4	delete "Operational"	Editorial	This change deletes obsolete terminology; this publication was previously titled the Illinois Power Nuclear Program Operational Quality Assurance Manual; it is a term no longer applicable.

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
2	18.2.1b5	change Emergency Plan audit frequency based on the change to 10CFR50.54 (t)(1)	Change	This change modifies the requirement to audit the Emergency Plan every 12 months and replaces that requirement to reflect a change to the Code of Federal Regulations. Effective April 28,1999, 10 CFR 50.54 (t)(1) was amended to allow audits to be conducted as necessary, based on an assessment against performance indicators, and as soon as reasonably practical after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect emergency preparedness but no longer than 12 months after the change. In any case all elements of the emergency plan must be reviewed at least once every 24 months. Use of this alternative is allowed by the rule change. Current Monthly and Proposed NRC Plant Performance Indicators are in place for review and assessment on a monthly and quarterly basis. Task Assignment Tracking (TATs) items will ensure that these reviews and evaluations are performed by QA Functional Area Leads. This is not a reduction in commitment in that the current regulation is being followed.
2	18.2.1b6	change Security Plan audit frequency based on the change to 10 CFR 50.54 (p)(3)	Change	This change modifies the requirement to audit the Security Plan every 12 months and replaces that requirement to reflect a change to the Code of Federal Regulations. Effective April 28,1999, 10 CFR 50.54 (p)(3) was amended to allow audits to be conducted as necessary, based on an assessment against performance indicators, and as soon as reasonably practical after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect Security but no longer than 12 months after the change. In any case all elements of the security plan must be reviewed at least once every 24 months. Use of this alternative is allowed by the rule change. Current Monthly and Proposed NRC Plant Performance Indicators are in place for review and assessment on a monthly and quarterly basis. Task Assignment Tracking (TATs) items will ensure that these reviews and evaluations are performed by QA Functional Area Leads. This is not a reduction in commitment in that the current regulation is being followed.
2	18.2.1b14	correct revision from December 1977, to Revision 1, February 1979	Editorial	This is an editorial change to correct a previous editing error. This manual, Appendix B, (page B-1) indicates a commitment to RG 4.15 Revision 1 (February 1979). This change corrects the conflict.

CLINTON POWER STATION QUALITY ASSURANCE MANUAL
REVISION 27 MATRIX OF CHANGES

Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
3	18.2.1g	change "assessments" to "field observations" change "non-Audits" to "any" change "sections" to "section"	Change	Field Observations have been added as a mechanism for determining Audit/Assessment scope and activities to be audited. Field Observations are a means to collect and record data during real time observations of activities and are defined in Appendix A of the QA Manual. Use of field observations provide an additional source of information which is gathered by qualified personnel. Independence and authority remain the same. This does not change the method for audit/assessment planning; it only provides an additional source of information and does not affect the effectiveness of the audit/assessment planning function, or reduce a commitment. Other changes to this paragraph are made to improve clarity.
4	18.3.3b	add hyphen to quality related	Editorial	This is an editorial change to correct spelling.
	Appendix A	**Terms**		
A-1	TERMS	amend "Audit" definition; added that audit and assessment are synonymous	Change	CPS has modified the audit process to smaller scope assessments which are performed over the audit frequency period. Independence and authority are not affected by this change and no commitments have changed. Use of the term Assessments and modification of the definition of Audit does not reduce commitments or effectiveness of the quality assurance function described in the previously approved QAPD. Audits/Assessments are performed in accordance with the requirements of ANSI N45.2.12.
A-1	TERMS	added definition of "Augmented D"	Editorial	This is an editorial change. This term is used in Appendix B of this manual and the definition is being added as amplifying information.
A-3	TERMS	add definition for "Field Observations"	Change	This change defines a new QA activity and term used in the QA Manual. Independence and authority are not affected and no commitments have changed. See the explanation/justification associated with paragraph 18.2.1g.
A-4	TERMS	revised definition of Plant Staff	Change	This change is a result of the organizational changes as described in paragraph 1.3.3.

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Page in QAM Rev. 27	Paragraph	Summary of Changes	Editorial, Change, or Commitment Reduction	Explanation / Justification
A-6	TERMS	added hyphen to safety related in two places in Safety-Related definition	Editorial	This is an editorial change to correct spelling
A-7	TERMS	indicated system as plural in the term Safety Class 2	Editorial	This is an editorial change for clarity.
A-7	TERMS	omit "form" add "from" in the term Safety Class 2 (f)	Editorial	This is an editorial change to correct a typographical error.
	Appendix B	**Supplemental Application**		
B-8	Chapter 9	corrected punctuation	Editorial	These are editorial changes to correct punctuation.
B-10	Chapter 3	add comma after packaging	Editorial	This is an editorial change to correct punctuation.

10CFR50.54 (a) EVALUATION

See QAP-102.02, APPENDIX A for Instructions

ACTIVITY EVALUATED: CPS Quality Assurance Manual Revision 27

DESCRIPTION OF CHANGE: See attached.

REASON FOR CHANGE: See attached.

AFFECTED SYSTEM(S)/COMPONENTS(S)/FUNCTIONS: (Refer to USAR Table 3.2-1) See attached

Prescreening criteria for changes:

If the change is limited to one or more of the following, further evaluation is not required. A reduction in commitment does not exist.

Circle the applicable criteria and sign the appropriate line at the end of this form.

ACN 17/1

a. Administrative improvement and clarifications, spelling corrections, punctuation, or editorial items.
b. Reassignment of responsibility for an activity from one group to another (exclusive of reassigning responsibility from the QA department to another organization).
c. Non-substantive organizational changes (i.e. positions not addressed by the QAM or USAR).
d. The use of a QA standard approved by the NRC which is more recent than the QA standard in CPS's current QA program at the time of the change.
e. The use of a quality assurance alternative or exception approved by an NRC safety evaluation, provided the bases of the NRC approval are applicable. **(Attach the applicable NRC safety evaluation to this form).**
f. The use of generic organizational position titles that clearly denote the position function, supplemented as necessary by descriptive text rather than specific titles.
g. The use of generic organizational charts to indicate functional relationships, authorities, and responsibilities, or alternately the use of descriptive text.
h. The elimination of quality assurance program information that duplicates language in quality assurance regulatory guides and quality assurance standards to which CPS is committed.
i. Organizational revisions that ensure that persons and organizations performing quality assurance functions continue to have the requisite authority and organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations.

ACTIVITY EVALUATED: CPS Quality Assurance Manual Revision 27

QAPD APPLICABILITY DETERMINATION

1. **Does this change affect authority, independence, or management reporting levels previously established for organizations performing quality assurance functions as described in the Quality Assurance Program Description (QAPD)?** (Refer to CPS 1005.06 Appendix B, Table 1. NOTE: "Quality Assurance Functions" are not limited to functions performed by the Quality Assurance Department.)

Yes ___ No ✓

Because: See attached.

2. **Does this activity reduce commitments or the effectiveness of quality assurance functions specifically delineated in the QAPD?**

Yes ___ No ✓

Because: See attached.

3. **Does this change reduce the level of activities, controls, oversight, or QA Department involvement described in the QAPD?**

Yes ___ No ✓

Because: See attached.

ACTIVITY EVALUATED: CPS Quality Assurance Manual Revision 27

Yes ___ No ✓

4. **Does this change delete structures, components, or systems covered under the QA Program?** (Refer to USAR Table 3.2-1)

Because: See attached.

Yes ___ No ✓

5. **Will this change result in no longer continuing to satisfy the criteria of 10CFR50, Appendix B:**

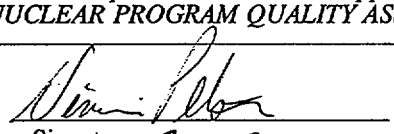
Because: See attached.

If the answer is "yes" to any of the above, a possible reduction in commitment is indicated. Ensure appropriate justification is provided for all questions answered "no"; a simple statement of conclusion in itself is not sufficient. If all questions are answered "no", the change may be inplemented.

ACTIVITY EVALUATED: CPS Quality Assurance Manual Revision 27

DOCUMENTS REVIEWED IN CONJUNCTION WITH THIS EVALUATION: See attached.

NOTE
If a reduction in commitment is identified, the change may not be implemented until NRC approval has been obtained. Process the change in accordance with QAP-102.02, IP NUCLEAR PROGRAM QUALITY ASSURANCE MANUAL.

Prepared by:	Vivian Petsas		10/28/99
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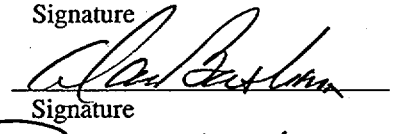
Reviewed by: (Supervisor or above)	D. V. Basham		10/28/99
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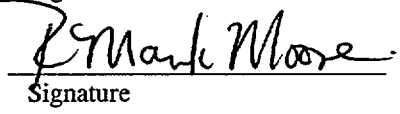
Manger-QA Approval:	R. M. Moore		10/28/99
	Printed Name	Signature	Date:

10CFR50.54(a) EVALUATION

DESCRIPTION OF CHANGE:

The Illinois Power Nuclear Program Quality Assurance Manual (QAM), Revision 27 is an update, which is required by 10CFR50.71(e). Revision 27 includes editorial changes, amends the QA audit/assessment functions, and incorporates recent USAR changes which correct position titles and responsibilities. All changes made to the QAM are identified in detail on the attached Matrix of Changes which shows the paragraph(s) affected by the change and the justification/explanation for the change.

Editorial changes as noted on the matrix are not addressed by this evaluation as specified by 10CFR50.54(a)(4)(ii), Conditions of Licenses.

Changes to the QAM included in this evaluation are as follows:

1. Changed the title and transferred responsibilities for the Senior Vice President-Energy Supply and Vice President to the position titled Vice President/Chief Nuclear Officer (VP/CNO).
2. Added the new position Assistant Vice President and specified responsibilities.
3. Transferred responsibilities for training from the Manager-Nuclear Training and Support to the new position Director-Nuclear Training; changed the title Manager-Nuclear Training and Support to Manager-Nuclear Support to reflect this.
4. Transferred responsibility for the Corrective Action Program administration from the Manager-Nuclear Safety and Performance Improvement (NSPI) to the Manager Clinton Power Station (CPS).
5. Deleted reference to the Manager-Purchasing and Material Control and transferred responsibilities to the Manager-Work Management.
6. Established the new position Manager-Maintenance and modified the responsibilities of the Manager-CPS to reflect the transfer of responsibility for plant maintenance to the Manager-Maintenance.
7. Established new position Manager-Work Management; modified responsibilities of the Manager-CPS to reflect the transfer of the responsibility for work planning/scheduling functions to the Manager-Work Management; modified the responsibilities of the Manager-Nuclear Support to reflect transfer of warehousing, receiving, and material management responsibilities to the Manager-Work Management.
8. Established the new position Director-Projects/Contracts.
9. Changed the title Shift Supervisor to Shift Manager.
10. Specified Nuclear Review and Audit Group (NRAG) reporting responsibilities.
11. Changed Emergency Plan audit frequency from every 12 months to as necessary, but not to exceed 24 months.
12. Changed Security Plan audit frequency from every 12 months to as necessary, but not to exceed 24 months.
13. Added the definition of "Field Observations".
14. Added the use of field observations to determine audit scope.
15. Added use of the term "assessment" and modified the definition of audit to include assessments.
16. Added additional detail to Manager-QA responsibilities clarifying activities for which the position is responsible.
17. Added detail to the Manager-NSED responsibilities for the Inservice Inspection Program.
18. Added the responsibility for all nuclear program departments to coordinate with NSED to document the significance of nonconforming items.
19. Added Director-Projects/Contracts responsibilities related to purchase contracts.
20. Changed the title of the manual from Illinois Power Nuclear Program Quality Assurance Manual to Clinton Power Station Quality Assurance Manual.

REASON FOR CHANGE:

This activity satisfies 10CFR50.71(e) which stipulates that QAM revisions be filed with the Nuclear Regulatory Commission annually or 6 months after each refueling outage provided the interval between successive updates does not exceed 24 months.

1. The change transferring responsibilities previously associated with the Senior Vice President-Energy Supply to the VP/CNO was a corporate decision which streamlined the reporting chain, such that the new position VP/CNO is the most senior level management position, has responsibility for the sole nuclear unit, and reports to the CEO.

2. The position Assistant Vice President was added to provide assistance to the VP/CNO.

3. The transfer of all duties concerning training from the Manager - Nuclear Training and Support to the new position Director Nuclear Training provides additional Management focus on training by an individual reporting directly to the VP/CNO and unburdens the Manager - Nuclear Training and Support. The title was changed from the Manager - Nuclear Training and Support to the Manager - Nuclear Support to reflect the transfer of this responsibility.

4. The transfer of the administration of the Corrective Action Program from the Manager - NSPI to the Manager-CPS was accomplished to move the administrative function only. All duties were transferred and the manager receiving the duties reports to the same level of management.

5. The change eliminating reference to the position of the Manager - Purchasing and Material Control was accomplished to change the reporting function from an off-site manager to the Manager - Work Management at Clinton Power Station.

6. The transfer of all maintenance responsibilities from the Manager - CPS to the new position Manager - Maintenance provides additional management focus on maintenance by a manager reporting directly to the VP/CNO and unburdens the Manager - CPS.

7. The transfer of work planning and scheduling responsibilities from the Manager - CPS to the new position Manager-Work Management provides additional management focus on this area by a manager reporting directly to the VP/CNO and unburdens the Manager - CPS.

8. The Director - Projects/Contracts is a new position to establish a focal point for implementation of plant modifications and coordination of project implementation.

9. The title Shift Supervisor was changed to Shift Manager to better describe the position responsibilities. This position continues to meet the same 10CFR55 licensing requirements as Shift Supervisor.

10. NRAG reporting responsibilities were clarified at the request of NRAG.

11., 12. The change to the frequency for performance of Emergency Plan and Security Plan audits is based on a recent change to 10CFR50.54(t)(1)(ii) and 10CFR50.54(p)(3)(ii). This allows audits to be conducted as necessary based on the review and assessment against performance indicators, and as soon as reasonably practical after a change occurs in personnel, procedures, equipment, or facilities that could adversely affect emergency preparedness or security. This change will provide more flexibility to reduce the number of audits based on positive performance and a stable or unchanging program.

13. The definition of "field observations" was added to define a new term in the QAM.

14. The change allowing use of field observations for evaluation in the determination of audit scope provides an additional source of information on which to base the focus of planned audits. Review of the observations also serve to avoid duplication of effort (re-review of activities already observed during other QA field activities).

15. Use of the term "assessment" is incorporated to better reflect terminology used in the QA audit process, which encompasses continuous assessment of critical attributes of program elements.

16. The detail added to the Responsibilities of the Manager - QA was accomplished to provide more precise information.

17. The detail added to the Responsibilities of the Manager - NSED was accomplished to provide more precise information.

18. Transfer of the responsibility to coordinate with NSED to document the safety significance of nonconforming items was made to reflect the creation of new departments as previously described and expand the duty to all other departments that may be involved in identification of nonconforming items.

19. Project/ Contracts responsibility related to purchase contracts was added to reflect that Projects/ Contracts will also perform this function. (This responsibility is shared with Work Management.)

20. The manual name was changed to specify that it is unique to Clinton Power Station.

AFFECTED SYSTEM(S)/COMPONENTS(S)/FUNCTIONS: (Refer to USAR Table 3.2-1)
No plant systems, structures, or components are affected due to this activity.

QAPD APPLICABILITY DETERMINATION

1. Does this change affect authority, independence, or management reporting levels previously established for organizations performing quality assurance functions as described in the Quality Assurance Program Description (QAPD)? (Refer to CPS 1005.06 Appendix B, Table 1. NOTE: "Quality Assurance functions" are not limited to functions performed by the Quality Assurance Department.)

Yes _____ No X

Because:
All of the organizational changes described in revision 27 of the QAM are exclusive of the CPS QA department.

1. The title change and transfer of responsibilities from the Senior Vice President - Energy Supply to the VP/CNO is not a reduction in commitment. The reporting level for the VP/CNO remains the same as in the QAM, Revision 26, for the Senior Vice President (to the CEO). The change in any described responsibilities transferred to the VP/ CNO from the previous position of Vice President does not constitute a reduction in commitment, since the change results in the new position reporting to a higher level of management (from the Senior Vice President - Energy Supply to the CEO). Authority and independence remain the same.

2. Addition of the new position Assistant Vice President does not affect authority, independence, or

management reporting levels previously established for any organization performing quality assurance functions as described in the previously submitted QAM. This new position was created to provide assistance to the VP/CNO, reports directly to the VP/CNO, and does not affect any other organization's reporting relationship.

3. The transfer of all duties and responsibilities for training from the Manager - Nuclear Training and Support to the new position of Director- Nuclear Training, and subsequent title change is a simple transfer of responsibility from one group to another and does not involve transferring the responsibility from the QA department to another organization. The reporting level of the new position is maintained the same as in Revision 26 of the QAM. Both the Director - Nuclear Training and the Manager - Nuclear Support report to the same management level (VP/CNO). Therefore, this does not constitute a reduction in commitment.

4. The transfer of administration of the Corrective Action Program from the Nuclear Safety Performance Improvement (NSPI) Department to the Manager - Clinton Power Station (CPS) is a simple transfer of an activity from one group to another. Both departments are led by a manager who reports to the VP/CNO. This organization change, therefore, maintains the same reporting level. Independence and authority are identical and therefore, this does not constitute a reduction in commitment.

5. Deletion of reference to the Manager - Purchasing and Material Management and transfer of responsibilities to the Manager - Work Management does not affect authority or independence. This transfers an activity and reporting function from an off site organization to Work Management at CPS. The Manager - Purchasing and Material Management reports to the off-site Senior Vice President of the Support Services Business Group (at Head Quarters); the Manager - Work Management reports to the CPS VP/CNO. This does not result in a lower reporting level since the Chief Nuclear Officer position reports to the CEO as did the Senior Vice President Support Business Services Business Group. Therefore, this does not constitute a reduction in commitment.

6. Establishing the Manager - Maintenance position and transfer of all duties related to maintenance, work planning and scheduling from the Manager - CPS does not affect the authority, independence, or management reporting levels previously established in revision 26 of the QAM. Both managers report to the same level (to the VP/CNO).

7. Establishing the Manager - Work Management position and transfer of work planning and scheduling from the Manager - CPS does not affect authority, independence, or management reporting levels previously established for any organization performing quality assurance functions as described in the Quality Assurance Program Description (QAPD). Both of these departments are led by managers with the same reporting level (to the VP/CNO).

8. The addition of the new position, Director - Projects and Contracts does not affect authority, independence, or management reporting levels previously established for any organization performing quality assurance functions as described in the QAPD. This is a new position to establish a focal point for plant modifications and project implementation. This position reports directly to the VP/CNO.

9. The change of the title Shift Supervisor to Shift Manager is a simple title change that reflects a change made to the CPS USAR. Both positions meet the same ANSI ANS 3.1-1978 requirements. Duties do not change; Shift Managers are in charge of and responsible for CPS plant operations. No changes in reporting levels, authority or independence resulted from this change.

10. Specifying Nuclear Review and Audit Group (NRAG) reporting responsibilities does not affect authority, independence, or management reporting levels previously established for any organization performing quality assurance functions as described in the previous QAPD. This is an addition of information not contained in revision 26 to the QAM and does not represent a change in the level of the reporting function for NRAG.

This does not constitute a reduction in commitment.

11., 12. The change to Security Plan and Emergency Plan QA audit frequency does not involve management reporting levels. Authority and independence of QA performing audits of these two organizations is not affected by this change, only the frequency of the activity. Therefore, from this perspective it does not constitute a reduction in commitment.

13. The addition of the definition of Field Observations does not involve authority, independence or level of reporting issues. This does not constitute a reduction in commitment.

14. Use of the term "Field Observations" in determining audit scope does not affect authority, independence or level of reporting issues. Field Observations as used in the QAM are performed by individuals qualified in accordance with the QA Department Training Qualification and Certification Manual with the same independence afforded other QA department functions as specified in 10CFR 50 Appendix B. This does not constitute a reduction in commitment.

15. Use of the term "Assessments" and modification of the definition of audit does not involve any authority, independence or level of reporting issues.

16. The detail added to the Responsibilities of the Manager - QA was accomplished to provide more precise information and does not involve any authority, independence or level of reporting issues.

17. The detail added to the Responsibilities of the Manager - NSED was accomplished to provide more precise information and does not involve any authority, independence or level of reporting issues.

18. Addition of the responsibility for all nuclear program departments to coordinate with NSED to document the safety significance of nonconforming items is a simple transfer of a duty from CPS Plant staff to other organizations. It does not involve transferring a responsibility from the QA Department to another. Independence, and reporting levels are not an issue related to this change.

19. The Manager-Project/Contract responsibility related to purchase contracts was added to reflect that Projects/ Contracts will also perform this function. (This responsibility is shared with Work Management.) These activities are controlled by CPS procedures and the activity itself does not change. It is a simple transfer of an activity; Independence, authority and reporting levels are not effected by this change. The Manager - Projects/Contracts reports to the VP/CNO, as does the Manager-Work Management.

20. Changing the name of the QA Manual does not affect authority, independence or management reporting levels previously described in revision 26 of the QAM. Clinton Power Station is the only nuclear power plant covered by this manual and the manual name was changed to reflect this. Nuclear program responsibilities are located at the Clinton Power Station with reporting to the CEO, Illinois Power as described in the QAM revision 27.

Yes _____ No X___ **2. Does this activity reduce commitments or the effectiveness of quality assurance functions specifically delineated in the QAPD?**

Because:

1. The title change and transfer of responsibilities from the Senior Vice President - Energy Supply to the VP/CNO is not a reduction in commitment. This change does not affect any previous commitments or the effectiveness of the performance of quality assurance functions assigned to this position. The change serves to focus those responsibilities on a position on-site at CPS with direct access to the CEO.

2. Addition of the new position Assistant Vice President position does not reduce commitments or the effectiveness of quality assurance functions specifically delineated in the QAPD. It serves to provide assistance with functions assigned to the Vice President and does not change any of those functions.

3. The transfer of all duties and responsibilities for training from the Manager - Nuclear Training and Support to the new position of Director- Nuclear Training, and subsequent title change does not reduce commitments or the effectiveness of quality assurance functions specifically delineated in the QAPD. CPS was originally licensed with a separate department for training activities. Actual activities performed are not affected by this change.

4. The transfer of administration of the Corrective Action Program from the Nuclear Safety Performance Improvement (NSPI) Department to the Manager - Clinton Power Station (CPS) is a simple transfer of an activity from one group to another. This change does not involve a change to the activity itself and therefore, does not reduce commitments or the effectiveness of quality assurance functions.

5. Deletion of the reference to the Manager - Purchasing and Material Management and transfer of responsibilities to the Manager - Work Management is a simple transfer of an activity from one group to another. These activities are controlled by CPS procedures and duties do not change. Therefore this action does not reduce commitments or the effectiveness of quality assurance functions.

6. Establishing the Manager - Maintenance position and department transfers quality activities related to maintenance from the Manager - CPS to another group and does not reduce commitments or the effectiveness of quality assurance functions that the department performs.

7. Establishing the Manager - Work Management position and transfer of work planning and scheduling from the Manager - CPS transfers an activity from one group to another. It does not reduce commitments or the effectiveness of quality assurance functions that the department performs.

8. The addition of the new position, Director - Projects /Contracts does not reduce commitments or the effectiveness of quality assurance functions previously described in the QAPD. It is a new position to establish a focal point for plant modifications and project implementation.

9. The change of the title Shift Supervisor to Shift Manager is a simple title change that reflects a change made to the CPS USAR. Both positions meet the same ANSI ANS 3.1-1978 requirements. Duties do not change; Shift Managers are in charge of and responsible for CPS plant operations. The title change does not reduce commitments or the effectiveness of quality assurance functions that the position performs.

10. Specifying Nuclear Review and Audit Group (NRAG) reporting responsibilities does not reduce commitments or the effectiveness of quality assurance functions that the organization performs. This is an addition of information not contained in revision 26 to the QAM.

11., 12. The change to the frequency for performance of Emergency Plan and Security Plan audits is based on a recent change to 10CFR50.54(t)(1)(ii) and 10CFR50.54(p)(3)(ii). This will allow the audits to be conducted as necessary based on the review and assessment against performance indicators, and as soon as reasonably practical after a change occurs in personnel, procedures, equipment, or facilities that could adversely affect the subject areas, but not to exceed 24 months. This change will provide more flexibility to adjust the number of audits/assessments based on positive performance and a stable or unchanging program. The use of this QA standard, which is more recent than the QA standard in CPS's current QA program, is approved by the NRC in the form of the rule change. Use of this alternative allowed by the rule change does not reduce a commitment since the previous QAPD reflected the requirements of 10CFR50.54(t) and 10CFR50.54(p)(3)(ii), as well. Use of this acceptable alternative provided by 10CFR50.54(t)(1)(ii) and 10CFR50.54(p)(3)(ii) does not reduce the effectiveness of the quality assurance

function in evaluation of these two activities, in that current Monthly and Proposed NRC Plant Performance Indicators will be reviewed and assessed on a monthly and quarterly basis. Performance indicators for these areas include:

Security
- Security Events (monthly)
- Entrance and Exit Processing violations (monthly)
- Protected Area Security Equipment Performance Index (quarterly)
- Personnel Screening Program Performance (quarterly)
- Fitness-For - Duty (FFD) Personnel Reliability Program Performance (quarterly)

Emergency Plan
- ERO Drill / Exercise Performance
- ERO Drill Participation

These Performance Indicators are in place with approximately two years of data. Task Assignment Tracking (TATs) items will ensure that these reviews and evaluations are performed by QA Functional Area Leads. These measures ensure that the effectiveness of QA reviews is not diminished by the flexibility provided by the change to this rule.

13. The addition of the definition of Field Observation does not reduce commitments or the effectiveness of quality assurance functions previously described in the QAPD. This is an additional means of documenting observations and is considered a program enhancement.

14. The change allowing use of field observations for evaluation in the determination of audit scope provides an additional source of information on which to base the focus of planned audits. Review of the observations also serve to avoid duplication of effort (re-review of activities already observed during other QA field activities). Field Observations as used in the QAM are performed by individuals qualified as assessors in accordance with the QA Department Training Qualification and Certification Manual. Field Observations are a means to collect and record data during real time observations of plant activities and provide a mechanism to forward that documented information to management in a timely manner. Documented Field Observations also provide an additional source of information to be used to determine audit scope. This does not change the method for audit/assessment planning. It only provides an additional source of information. Use of "Field Observations" in determining audit scope does not reduce commitments or the effectiveness of quality assurance audit planning process previously described in the QAPD, but rather enhances the process by providing addition data for performing this function.

15. Use of the term Assessments and modification of the definition of Audit does not reduce commitments or effectiveness of the quality assurance audit function described in the QAM Revision 26. Audits are performed in accordance with the requirements of ANSI N45.2.12.

16. The detail added to the responsibilities of the Manager - QA was accomplished to provide more precise information and does not affect any commitments or the effectiveness of any quality assurance function.

17. The detail added to the responsibilities of the Manager - NSED was accomplished to provide more precise information and does not affect any commitments or the effectiveness of any quality assurance function.

18. Addition of the responsibility for all nuclear program departments to coordinate with NSED to document the safety significance of nonconforming items is a simple transfer of a duty from CPS Plant staff to other organizations. It does not reduce the commitment to perform this function or reduce the effectiveness of the activity.

19. Addition of Project/ Contracts responsibility related to purchase contracts was added to reflect that Projects/ Contracts will also perform this function (this responsibility is shared with Work Management). These activities are controlled by CPS procedures and the activity itself does not change. It does not reduce the commitment to perform the function or reduce the effectiveness of the activity.

20. Changing the name of the QA manual from the Nuclear Program Quality Assurance Manual to the Clinton Power Station Quality Assurance Manual does not reduce commitments or the effectiveness of quality assurance functions. It only changes the name to reflect that the Quality Assurance program applies specifically to Clinton Power Station which is the only nuclear plant in the nuclear program.

3. Does this change reduce the level of activities, controls, oversight, or QA Department involvement described in the QAPD?

Yes _____ No X

Because:
The organizational and title changes (changes 1, 3-8) described above do not reduce the level of activities, controls, oversight, or QA Department involvement in any of the activities for which any of the above mentioned positions are responsible. These changes do not involve any change to the manner in which QA department provides oversight for these activities or diminish QA's responsibility for oversight of the activities of these departments. These changes are a transfer of the responsibility from one group to another, exclusive of the QA Department, and do not affect the level of the activities. The manner in which the activities associated with these changes are controlled remains the same under the responsibility of a different group.

The detail added to the responsibilities of the Manager - QA and Manager - NSED (changes number 16, 17) does not reduce the level of existing activities, controls, oversight or QA Department involvement in any activities previously performed by QA or NSED. The addition of this information serves to only specify activities described elsewhere in the QAM.

Addition of the new position Assistant Vice President (change 2) provides for an additional individual to assists the VP/CNO and does not reduce the level of activities, or controls associated with the duties assigned to the VP/CNO. Oversight or QA Department involvement is not affected by addition of this new position.

The change of the title Shift Supervisors to Shift Managers (change 9) is a simple title change which reflects a change made to the CPS USAR. Both positions meet the same ANSI ANS 3.1-1978 requirements. Shift Managers are in charge of and responsible for CPS plant operations. This title change does not reduce the level of activities for which the position is responsible. Likewise, controls, oversight, or QA Department involvement described in the QAPD are in no way affected by this change.

Specifying Nuclear Review and Audit Group (NRAG) reporting responsibilities (change 10) does not reduce the level of activities, controls, oversight, or QA Department involvement described in the QAPD

Use of the term "Field Observations" in determining audit scope and the addition of the definition of field Observations (changes 13 and 14) do not reduce the level of activities, controls, oversight, or QA Department involvement described in the QAPD. Field observations are defined in Appendix A, Glossary Of Terms. Field Observations are a means to collect and record data during real time observations of activities and will provide a mechanism to forward that documented information to management in a timely manner. Use of field observations provide an additional source of information which is gathered by personnel qualified in accordance with the QA Training and Certification Manual and used to determine audit scope. This does not change the method for audit/assessment planning. It only provides an additional source of information. This does not constitute a reduction in commitment.

Use of the term "Assessments" and modification of the definition of audit (change 15) does not reduce the level

of activities, controls, oversight, or QA Department involvement previously described in the QAPD. CPS has modified the audit process to smaller scope assessments which encompasses continuous assessment of critical attributes of program elements that are performed over the audit frequency period. This does not reduce the level of activity. Audits/assessment are performed in accordance with ANSI N45.2.12.

The change to the frequency for performance of Emergency Plan and Security Plan audits (changes 11, 12) is based on a recent change to 10CFR50.54(t)(1)(ii) and 10CFR50.54(p)(3)(ii). This allows audits to be conducted as necessary based on the review and assessment of performance indicators, and as soon as reasonably practical after a change occurs in personnel, procedures, equipment, or facilities that could adversely affect emergency preparedness/security. This change will provide more flexibility to conduct audits based on positive performance and a stable or unchanging program. Use of this alternative allowed by the rule change does not reduce QA Department involvement in evaluation of these two activities in that current Monthly and Proposed NRC Plant Performance Indicators will be reviewed and assessed on a monthly and quarterly basis. Performance indicators for these areas include:

Security
- Security Events (monthly)
- Entrance and Exit Processing violations (monthly)
- Protected Area Security Equipment Performance Index (quarterly)
- Personnel Screening Program Performance (quarterly)
- Fitness-For - Duty (FFD) Personnel Reliability Program Performance(quarterly)

Emergency Plan
- ERO Drill / Exercise Performance
- ERO Drill Participation

The use of this QA standard, which is more recent than the QA standard in CPS's current QA program, is approved by the NRC in the form of the rule change. Performance Indicators are in place with two years of data. Task Assignment Tracking (TATs) items will ensure that these reviews and evaluations are performed by QA Functional Area Leads.

18. Addition of the responsibility for all nuclear program departments to coordinate with NSED to document the safety significance of nonconforming items is a simple transfer of a duty previously specified for CPS Plant staff to other organizations. It does not reduce the level of the activity, or change the activity or controls. QA Department involvement in this activity remains unchanged.

19. Project/Contracts responsibility related to purchase contracts (this responsibility is shared with Work Management) was added to reflect that Projects/ Contracts will also perform this function. These activities are controlled by CPS procedures and the activity itself does not change. The level of the activity and controls are not reduced. QA involvement in this activity remains unchanged.

20. Changing the name of the QA manual from the Nuclear Program Quality Assurance Manual to the Clinton Power Station Quality Assurance Manual does not reduce the level of activities, controls, oversight, or QA Department involvement. It only changes the name to reflect that the Quality Assurance Program applies specifically to Clinton Power Station, which is the only nuclear plant in the Nuclear Program.

Yes ____ No X__ **4. Does this change delete structures, components, or systems covered under the QA Program?** (Refer to USAR Table 3.2-1)

Because:
No structures, components, or systems covered under the previously accepted QA Program are affected by these organizational changes, audit frequency changes, or other minor changes as described in this evaluation. None involve Table 3.2-1 or any other hardware and Table 3.2-1 was not changed as a result of any of the changes to the QAM.

Yes __ No X **5. Will this change result in no longer continuing to satisfy the criteria of 10CFR50, Appendix B?**

Because:
The majority of these changes are organizational or additions of information and did not result in the deletion of any programs or measures required by 10CFR50 Appendix B.

DOCUMENTS REVIEWED IN CONJUNCTION WITH THIS EVALUATION:
Illinois Power Nuclear Program Quality Assurance Manual, Revision 26
Clinton Power Station Quality Assurance Manual Revision 27
Clinton Power Station Quality Assurance Manual Revision 27, Matrix of Changes
USAR Table 3.2-1
10CFR50 Appendix B
10CFR50.54(t)
10CFR50.54(p)
USAR Change 8-103, ORM Change 19-2, Safety Evaluation 89-028, CPS Organizational Change
USAR Change 8-240, Safety Evaluation 98-178, Addition of Vice President
USAR Change 8-330, Safety Evaluation 99-120, CPS Organizational Changes
USAR Change 8-153, Safety Evaluation Screening, Manger - Nuclear Support
USAR Change 8-339, Safety Evaluation 99-128, CPS Organizational Changes, Corrective Action Program
USAR Change 8-384, Safety Evaluation 99-168, Transition of Procurement Engineering and Purchasing into Material Management
ANSI ANS 3.1-1978
ANSI N45.2.12-1977