REVISION MATRIX

Page	Para.	Reason/Justification For Change	Change Source	Program Peduction
v-1 of 10	N/A	Changed the applicable edition of the ANSI N626.1 requirement for Authorized Nuclear Inservice Inspector (ANII) from 1975 to 1982. The major difference in the editions is the frequency of audits performed by the Authorized Nuclear Inservice Inspector Supervisor. The audits frequency was increased to twice per year in the 1982 edition.	QA	No
		Added requirement for the ANII to meet the requirements of ANSI N626.0-1982 for Authorized Nuclear Inspector (ANI).	QA	No
v-3 of 10	N/A	Added a definition for "Extended Quality Assurance Program."	QA	No
		Changed the title of Quality Assurance department section responsible for "Hold Point" from QC to Quality Verification (QV). QV is the correct acronym for the section that performs this function.	QA	No

IP NUCLEAR PROGRAM QA MANUAL

REVISION MATRIX

Chapter Glossary of Terms

Revision 21

Page	Para.	Reason/Justification For Change	Change Source	Program Reduction
v-1 of 10	N/A	Changed the applicable edition of the ANSI N626.1 requirement for Authorized Nuclear Inservice Inspector (ANII) from 1975 to 1982. The major difference in the editions is the frequency of audits performed by the Authorized Nuclear Inservice Inspector Supervisor. The audits frequency was increased to twice per year in the 1982 edition.	QA	No
		Added requirement for the ANII to meet the requirements of ANSI N626.0-1982 for Authorized Nuclear Inspector (ANI).	QA	No
v-3 of 10	N/A	Added a definition for "Extended Quality Assurance Program."	QA	No
		Changed the title of Quality Assurance department section responsible for "Hold Point" from QC to Quality Verification (QV). QV is the correct acronym for the section that performs this function.	QA	No

REVISION MATRIX

Page	Para.	Reason/Justification For Change	Change Source	Program Reduction
3 of 13	1.2.2.1	Changed the company officer charged with overall responsibility for Clinton Power Station from Chairman and Chief Executive Officer to President to reflect the current corporate structure.	QA	No
	1.2.2.2	Deleted "startup" from the Vice President's responsibilities. "Startup" was the startup program in place at Clinton Power Station prior to the plant receiving an operating license. This program is complete and no longer in place.	QA	No
7 of 13	1.2.2.12	Changed the name of the department from "Nuclear Program Assessment Group" (NPAG) to "Projects and Assessment". Changed the department head title from "Director" to "Manager". Added the responsibility for coordinating and administering special projects.	QA	No
8 of 13	1.2.3.h	Deleted the Quality Assurance Department responsibility associated with "startup". "Startup" was the startup program in place at Clinton Power Station prior to the plant receiving an operating license. This program is complete and no longer in place.	QA	No

REVISION MATRIX

Page	Para.	Reason/Justification For Change	Change Source	Program Reduction
8 of 13	1.2.3.1	Added the responsibility for the Quality Assurance Department to extend portions of the Illinois Power Quality Assurance Program to selected equipment important to reliable station operation but not included in the compliance based quality assurance program.	QA	No
9 of 13	1.2.3.1	Added equipment included in the extended quality assurance program to Quality Engineering section responsibilities.	QA	No
		Added "USAR changes" to Quality Engineering section responsibilities.	QA	No
	1.2.3.2	Reassigned the responsibility for "receipt, receipt documentation" from the Quality Verification Section to the Audit Section of the Quality Assurance Department.	QA	No
10 of 13	1.2.3.3	Reassigned the responsibility for "USAR" from the Quality Systems Section to the Quality Engineering Section of the Quality Assurance Department.	QA	No
		Changed NPAG department title to "Projects and Assessment".	QA	No
	1.2.3.4	Added audit performance and receipt inspections to responsibilities of the Audit Section. Receipt inspections were the responsibility of the Quality Verification Section. Audit performance	QA	No

Page	Para.	Reason/Justification For Change	Change Source	Program Reduction
		has been a responsibility of the Audit Section but was not specifically identified as such.		
11 of 13	1.2.4	Changed the Clinton Power Station departments that may delegate selected work to qualified outside organizations to include all Nuclear Program departments.	QA	No
12 of 13	Figure 1-1	Changed the organization chart to reflect the current Nuclear Program organization structure. "Chairman and CEO" was changed to "President" and "Director Nuclear Program Assessment" was changed to "Manager Projects and Assessment".		
		Removed "_____LINE SUPERVISION" from organization chart. This designation was a portion of a legend which was used to differentiate between individuals having supervisory and advisory interfaces. Advisory interfaces were deleted from this organization chart in previous revisions of the quality assurance manual. Therefore, the legend for line supervision is no longer necessary.	QA	No
13 of 13	Figure 1-2	Changed the organization chart to reflect the current Nuclear Program organizational structure. "Chairman and CEO" was changed to "President".	QA	No

REVISION MATRIX

Page	Para.	Reason/Justification For Change	Change Source	Program Reduction
3 of 6	2.2.3.b.1	Deleted reference to the "Policy Statement" portion of the Quality Assurance Manual. This statement was removed from the manual in revision 20, and reference to it in this paragraph should have been removed at that time.	QA	No
6 of 6	Table 2-1	Changed the Nuclear Program Assessment Group title tc Projects and Assessment.	QA	No

REVISION MATRIX

Page	Para.	Reason/Justification For Change	Change Source	Program Reduction
2 of 5	7.2	Clarified the Quality Assurance inspection personnel responsibility associated with inspecting, releasing, and identifying the inspection status of purchased material and equipment. This responsibility is applicable when specified in the purchase order by Nuclear Station Engineering Department.	QA	No

10CFR50.59
SAFETY EVALUATION SCREENING
(Complete All Blocks)

1.0 Document Evaluated IP NUCLEAR PROGRAM QUALITY ASSURANCE MANUAL

1.1 Number: NOT APPLICABLE Revision: 21

Title: IP NUCLEAR PROGRAM QUALITY ASSURANCE MANUAL

PDR/TCF/ACN (if applicable) NOT APPLICABLE

For CPS Procedures, list documents, checklist, and other forms which are being revised in this package; include revision numbers.

NOT APPLICABLE

This form is used to document the justification for not performing a full 10CFR50.59 safety evaluation for design or document changes, tests, and experiments. Chapter 5 of the Safety Evaluation Manual should be used as guidance. If all the questions can be answered "NO" with documented justification, then a full safety evaluation is not required.

SCREENING FOR FACILITY CHANGES

2.1 Is this a change to the facility as described in SAR (That is, does it result in any condition [including qualifications], operation, analysis result, or function contrary to the current SAR descriptions)?

Yes ___
No X

a. Applies regardless of the safety classification of the item being changed.
b. Applies whether the specific item being changed is identified in the SAR or not.
c. Applies even if no hardware is being changed, but the plant does not match the SAR description in some way. (Reference Safety Evaluation Manual 5.D.2 and 4.C)

Affected System(s)/Component(s)/Function(s):

NOT APPLICABLE

USAR/Tech Spec References reviewed:

USAR 13.1.1.2/TECH. SPEC. 6.0

Justification for answer to Question 2.1 above:

SEE ATTACHED JUSTIFICATION

Document Evaluated IP NUCLEAR PROGRAM QUALITY ASSURANCE MANUAL

SCREENING FOR PROCEDURE CHANGES,
TEST AND EXPERIMENTS

2.2 Is this a change to a procedure as described in the SAR (That is, is any system or component operated or is any organization function performed in any way contrary to a description in the SAR or assumed in any SAR analysis)? (Includes changes to acceptance criteria, setpoints or commitments described in the SAR)
(Reference Safety Evaluation Manual Articles 5.D.3 and 4.D)

Yes ___
No X

2.3 Is this a test or experiment not described in the SAR (That is, is any system or component operated in any way contrary to a description in the SAR or assumed in any SAR analysis)?
(Reference Safety Evaluation Manual Articles 5.D.4 and 4.M)

Yes ___
No X

Affected System(s)/Component(s)/Function(s):

NOT APPLICABLE

USAR/Tech Spec References reviewed:

USAR 13.1.1.2/TECH. SPEC. 6.0

Justification for answers to Questions 2.2 and 2.3 above:

SEE ATTACHED JUSTIFICATION

Qualified Originator	R. S. Frantz	R S Frantz	02/13/91
	Name	Signature	Date

Qualified Reviewer: Agrees with determination that no safety evaluation is required.

Qualified Reviewer	K. R. Graf	K R Graf	2/13/91
	Name	Signature	Date

Upon completion, this screening form shall be vaulted with the document evaluated. A copy, with a copy of the document evaluated, shall be forwarded to Supervisor-Technical Assessment, Licensing and Safety, V-920

Justification

Revision 21 of the IP Nuclear Program Quality Assurance (QA) Manual changes the organizational structure in chapter 1 of the manual to reflect the current Nuclear Program organizational structure. The overall responsibility for the Nuclear Program has been reassigned from the Chairman and Chief Executive Officer to the President. The responsibilities of the Nuclear Program Assessment Group have been assumed by the Manager - Projects and Assessment. Coordinating and administering selected special projects having interdepartmental responsibilities have been added to the responsibilities of the Manager - Projects and Assessment. The Projects and Assessment Department does not perform activities affecting quality but is included in the QA Manual only to identify its position in the Nuclear Program organization.

Other QA Manual changes include: revised the edition of the existing qualification standard associated with the Authorized Nuclear Inservice Inspector and added another qualification standard; added a definition for the extended quality assurance program; added provisions for selecting items for inclusion in the extended quality assurance program; reassigned responsibilities within the QA Department; deleted reference to "startup"; changed the list of Nuclear Program departments that may delegate selected work to outside organizations; deleted reference to the "Policy Statement" portion of the manual; and clarified the QA department responsibility for inspection status of purchased items. A description of each change is provided on the attached matrix of QA Manual changes.

The changes to the QA Manual do not affect the design functions, characteristics, configuration, or analysis of components, systems, or structures covered by the IP Nuclear QA Program. The basis is the IP Nuclear QA Program provides the programmatic administrative controls and associated departmental responsibilities for implementing the QA Program at CPS.

An evaluation in accordance with 10CFR50.54(a) determined that the changes to the QA Manual do not: (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 controls previously established over activities affecting quality of CPS structures, systems, or components.

This revision does not change the intent of the Safety Analysis Report (SAR). Administrative sections of the Technical Specifications were reviewed and are not affected by this revision.

IP Nuclear Program Quality Assurance Manual
Revision 21
10CFR50.54(a) Evaluation

Summary

Revision 21 to the IP Nuclear Program QA Manual was initiated to:

- Accurately reflect the Nuclear Program organization structure, i.e.; reassigned overall responsibility for the Nuclear Program from the Chairman and Chief Executive Officer to the President; and renamed the Nuclear Program Assessment Group as Projects and Assessments and appointed a Manager to head that department.

- Accurately reflect departmental responsibilities, i.e. revised Vice President, Projects and Assessment department (was Nuclear Program Assessment Group) and Quality Assurance department responsibility descriptions.

- Clarified the Quality Assurance department responsibility for inspection status of purchased items.

- Revised the edition of the existing qualification standard associated with the Authorized Nuclear Inservice Inspector and added another qualification standard.

- Added a definition for the extended quality assurance program and added provisions for selecting items for inclusion in the extended quality assurance program.

- Changed the list of Nuclear Program departments that may delegate selected work to outside organizations to include all departments.

- Deleted a reference to the "Policy Statement" portion of the manual since that portion was deleted in a previous manual revision.

Evaluation

The changes to the IP Nuclear Program QA Manual do not: (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 controls previously established over activities affecting quality of CPS structures, systems, or components.

Performed: P E Culhane 2/13/91
Supervisor - Quality Systems /Date

Reviewed: [signature] 2/13/91
Director - Quality Assurance /Date

Approved: R E Wyatt 2/14/91
Manager - Quality Assurance /Date

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INTRODUCTION

Illinois Power Company (IP), as principal 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, Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants;" Title 10 of the code of Federal Regulations, Part 71, Subpart H, "Quality Assurance for Packaging and Transportation of Radioactive Material;" and the American National Standard ANSI N18.7 (1976), "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants".

The IP Nuclear 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 further 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 approves the distribution and is responsible for the maintenance of this manual in accordance with approved departmental procedures. Each manual holder is responsible for maintaining his copy updated in accordance with Appendix A.

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 Package and Transportation of Radioactive Material.

AUTHORIZATION

The IP Nuclear Quality Assurance Program applies to every member of the Company performing work related to CPS and covered by the Manual. Specific responsibilities shall be assigned by IP management and supervision, consistent with the requirements described in this Quality Assurance Manual. It is emphasized that the portion of the program assigned to the Quality Assurance organization primarily concerns verification activities, such as inspection, auditing, surveillance, evaluating and reporting effectiveness, and providing recommended solutions to noted problems. The major portion of the Quality Assurance program is carried out by IP departments other than Quality Assurance. In recognition of these responsibilities, each Department Manager has concurred with the contents of this manual.

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.

Approved R E Wyatt
Manager - Quality Assurance

GLOSSARY OF TERMS

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.

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

Authorized Inspection Agency (AIA) - An agency designated as such by the appropriate legal authority of a State or Municipality of the United Sates or a Province of Canada or an insurance company authorized to write boiler and pressure vessel insurance in that jurisdiction.

Authorized Nuclear Inservice Inspector (ANII) - An authorized Nuclear Inservice Inspector is an employee of an Authorized Inspection Agency who meets the requirements of ANSI N626.1-1982 and the requirements of ANSI N626.0-1982 for Authorized Nuclear Inspector (ANI).

Certification - The act of determining, verifying and attesting in writing to the qualifications 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 Clinton Power Station operations, such as the American Society 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 recurrences, 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, gaging 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 IP's direct control and not within the IP organizational structure.

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

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

Hold Point - Point in a procedure or work document at which the performer is required to stop and notify the Quality Verification section (QV) of the Quality Assurance department to allow for planned inspections. The work activity shall not proceed without the point being signed by QV, QV being present 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 IP's Quality Assurance program activities retained under direct Company control and within the 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.)

Modification - A planned change in plant design or operation and accomplished in accordance with the requirements and limitations of applicable codes, standards, specifications, licenses and predetermined safety restrictions.

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 Staff - That organization which is directly responsible for the operation of the Clinton Power Station. The Plant Staff includes operations, technical, maintenance, radiation protection, and 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 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 either do or could 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 performed by Quality Assurance Inspectors verifying that the 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 the 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.

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 operational 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.

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 10CFR 100.

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 I 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 off-site 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 (3) 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 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.

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 of differing safety importance. Definitions of the various Safety Classes are:

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

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

a. Inserting negative reactivity to shut down the reactor,

b. Preventing rapid insertion of positive reactivity,

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

d. Providing emergency core cooling,

e. Providing and maintaining containment,

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

g. Storing spent fuel.

Safety Class 3 - Structures, systems and components that are not Safety Class 1 or Safety Class 2, but whose function is to process radioactive fluids and whose postulated failure would result in conservatively calculated offsite doses that exceed 0.5 rem to the whole body or its equivalent to any part of the body in accordance with Regulatory Guide 1.26.

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

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

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

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

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

USAR - Abbreviation for the Updated Safety Analysis Report, which is the document submitted by 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.

Verification/Inspection Point - A point in a procedure or work document at which the performer is required to notify Quality Verification (QV) in order to plan when they will perform the verification activity. A Verification/Inspection Point shall be capable of being verified after work completion.

Witness Point - Point in a procedure or work document at which the performer is required to stop and notify QV 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.

CHAPTER

1

ORGANIZATION

APPROVED BY: MANAGER-QUALITY ASSURANCE R E Wyatt

1.1 PURPOSE/SCOPE

To define the requirements for and to describe the establishment of an organizational structure, functional responsibilities and levels of authority concerning the performance of activities which affect the safety-related functions of structures, systems, or components for the Clinton Power Station.

1.2 DESCRIPTION

1.2.1 General

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

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.

Corporate Nuclear Policy Statements are formalized in Corporate Nuclear Procedures (CNP) as described in this manual. Each CNP is reviewed and concurred with by the Manager - Quality Assurance for QA program requirements. The CNPs are approved for use by the IP corporate officer(s) responsible for the activities covered by the CNP. Corporate Nuclear Procedures require the development and use of departmental procedures or instructions to describe interfaces and accomplish the activities covered by the CNP.

The organizational structure and functional responsibility assignments are such that: (1) attainment of quality objectives is by individuals assigned responsibility for specifying quality or performing work to specifications; (2) verification of conformance to established quality requirements is by those who do not have direct responsibility for specifying, producing, or expediting products; and (3) personnel in key quality assurance functions have direct access to responsible management.

Specific Quality Assurance activities (job duties and responsibilities) have been identified for each section within the QA department and are based on the amount and type of activities conducted. Staffing levels are established so that the work can be accomplished in a manner supportive of plant operations and outages. Further, once a year the QA department manning levels are reassessed and personnel levels are revised as necessary to assure adequate and timely coverage of QA activities. This review permits recruiting and training activities to be carried out in such a manner as to provide trained Quality Assurance personnel necessary to assure the quality of the work. Quality Assurance personnel are free from non-QA duties and provide full attention to assuring the effective implementation of the QA program. Effectiveness of the program is assured by Quality Assurance department participation in the work planning, through surveillance and audits, by the authority of Quality Assurance personnel to stop specific work activities where it appears that quality may be jeopardized, and the authority of the Manager - Quality Assurance to initiate a Stop Work Action. The Manager - CPS has the authority to bypass a stop work to place the plant in a safe and stable condition.

Inspectors are provided with approved inspection procedures and instructions prior to performing inspection operations. (During plant operations emergencies, inspections may be performed without written procedures.) To further assure that inspections are done in a timely manner, the QA organization identifies specific inspection points in the work documents and makes provisions for notification of verification/inspection witness, and hold points. In addition, designated QA personnel regularly attend and participate in planning, scheduling and status meetings during testing, operations and outages to assure (1) they are kept abreast of day-to-day projected work assignments throughout the plant and (2) that the necessary QA inspection controls, acceptance criteria, procedural controls and qualified QA staffing is available to properly carry out the assigned tasks.

1.2.2 Organization and Responsibilities

This section describes the organizational structure and individual responsibilities within IP for managing and implementing the QA program for the operation of the CPS. Figure 1-1 shows the organizational structure and relationships of individuals and departments within IP with management responsibility for performing quality-related activities.

1.2.2.1 President

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

1.2.2.2 Vice President

The Vice President is responsible for the overall effectiveness of the Quality Assurance program and is responsible for establishing the quality assurance policies, goals and objectives, as well as testing, maintenance, operations, nuclear support, and engineering. The Vice President is also responsible for assuring that annual management reviews are conducted and documented on the status, adequacy and effectiveness of the overall QA program. The Vice President is responsible for assuring that the authority and independence of Quality Assurance personnel are such that they can effectively assure the conformance to quality requirements and are independent of undue influences and responsibilities for schedule and costs.

1.2.2.3 Manager - Clinton Power Station

The Manager - Clinton Power Station reports to the Vice President and is responsible for the safe, reliable and efficient operation of the Clinton Power Station in accordance with the operating license. This includes ensuring that the IP Nuclear Quality Assurance Program, as described in subsequent sections of this manual, is incorporated in plant procedures and implemented by the Clinton Power Station organization.

1.2.2.4 Manager - Nuclear Station Engineering

The Manager - Nuclear Station Engineering reports to the 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 Clinton Power Station. These responsibilities include: the

preparation of specifications and drawings for the accomplishment of new designs, design changes and modifications; design interpretation; the conduct of design checks and reviews; technical evaluation of suppliers; ensure compliance with the ASME Code and other codes and standards; control of examination and inspection of ASME components; and coordinate all interface with the Authorized Inspection Agency (AIA), including provisions for the establishment of ANI hold/witness points and access to facilities and records. The Manager - NSED ensures that these activities are performed in accordance with the requirements of the IP Nuclear Quality Assurance Program.

1.2.2.5 Manager - Nuclear Planning and Support

The Manager - Nuclear Planning and Support reports to the Vice President and is responsible for providing direction of nuclear plant services organizations for planning, budgeting and resource management, accounts payable and payroll coordination, executive plans, fitness for duty, medical services, receiving and warehousing, records management, industrial safety, Nuclear Program staffing, compliance to federal regulation of personnel activities, and for corporate and plant integrated in these functional support disciplines. The Manager - Nuclear Planning and Support is responsible for controlling the procedures governing the procurement activities in support of the Nuclear Program. The Manager - Nuclear Planning and Support ensures that these activities are performed in accordance with the requirements of the IP Nuclear Quality Assurance Program.

1.2.2.6 Nuclear Review and Audit Group

The Nuclear Review and Audit Group (NRAG) reports to the 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.

1.2.2.7 Facility Review Group

An on-site committee whose function is to advise the Manager - Clinton Power Station on matters related to nuclear safety.

1.2.2.8 Manager - Nuclear Training

The Manager - Nuclear Training reports to the Vice President and is responsible for the direction and management of the Nuclear Training for Clinton Power Station. Duties include developing training standards, providing centralized training, providing

education support to Nuclear Managers/Directors and maintaining operation of the simulator. The Manager - Nuclear Training ensures that these activities are performed in accordance wit the requirements of the IP Nuclear Quality Assurance Program.

1.2.2.9 Manager - Quality Assurance

The Manager - Quality Assurance reports to the Vice President and is responsible for IP's overall Quality Assurance program definition, direction, evaluation and approval, including the IP Nuclear Quality Assurance Program. The Manager - Quality Assurance directs the Quality Assurance departmental activities related to the design, procurement, maintenance, modification, and operation of the 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 and health and safety of the public, or impact on capability to safely operate or shut down the plant are not adversely affected.

The qualifications of the Manager - Quality Assurance are at least equivalent to the education and experience requirements of Section 4.4.5 of ANSI/ANS 3.1-1978, "Selection and Training of Nuclear Power Plant Personnel". Specifically, the Manager - Quality Assurance will meet at least one of the following:

1. At the time of initial core loading, or assignment to the active position, the responsible person shall have six years experience in the field of quality assurance, preferably at an operating nuclear power plant, or operations supervisory experience. At least one year of this six years experience shall be nuclear power plant experience in the overall implementation of the quality assurance program. (This experience shall be obtained within the quality assurance organization.) A minimum of one year of this six years experience shall be related technical or academic training. A maximum of four years of this six years experience may be fulfilled by related technical or academic training; or,

2. EDUCATION: Bachelor Degree in Engineering or related science.

EXPERIENCE: At the time of initial core loading or appointment to the active position, the responsible person shall have four (4) years experience in the field of quality assurance, or equivalent number of years of nuclear plant experience in a supervisory position, preferably at an operating nuclear plant, or a combination of the two. At least one (1) year of this four years experience shall be nuclear power plant experience in the implementation of the quality assurance program. Six (6) months of the one year experience shall be obtained within the quality assurance organization. He must possess a thorough working knowledge of 10CFR50 Appendix B, ANSI N45.2, ANSI N18.7, familiarity with the ASME Boiler and Pressure Vessel Code and other applicable regulations, codes and standards.

1.2.2.9.1 Director - Quality Assurance

The Director - Quality Assurance reports to the Manager - Quality Assurance and is responsible for providing management and implementation of the Operations Monitoring Program that supports the safe and reliable operation of CPS. The Director - Quality Assurance is also responsible for providing direction and administration of the Quality System and Audit staffs in defining, establishing, and verifying compliance with the IP Nuclear Quality Assurance Program. In addition, the Audit staff is responsible for verifying the qualification of suppliers and assuring procurement documentation is acceptable.

1.2.2.10 Manager - Licensing and Safety

The Manager - Licensing and Safety reports to the Vice President and is directly responsible for providing representation and interface with regulatory agencies to maintain operating licenses and permits for CPS, management of the USAR, and the Environmental Report (ER), including amendment submittals, management of the resolution of licensing issues, conduct of licensing reviews and studies, perform safety studies and analyses, conduct of Independent Safety Evaluation Group (ISEG) efforts for significant operating data, provide representation to safety groups, management of the Emergency Preparedness Program, and the administration of tracking program for 10CFR21 items. The Manager - Licensing and Safety ensures that these activities are performed in accordance with the requirements of the IP Nuclear Quality Assurance Program.

1.2.2.11 Manager - Scheduling and Outage Management

The Manager - Scheduling and Outage Management reports to the Vice President and is responsible for management of the Scheduling and Outage Management Department personnel and resources. The Manager - Scheduling and Outage Management develops schedules as required to support Nuclear Program Departments. He coordinates the planning, scheduling and preparations for plant outages and is responsible for the execution of plant outages under the direction of the Manager - Clinton Power Station. He manages and directs the site contractor activities assigned to Scheduling and Outage Management. The Manager - Scheduling and Outage Management ensures that these activities are performed in accordance with the requirements of the IP Nuclear Quality Assurance Program.

1.2.2.12 Manager - Projects and Assessment

The Manager - Projects and Assessment reports to the Vice President and is directly responsible for conducting independent performance-based assessments of the Nuclear Program, conducting performance monitoring and analyses, coordinating Institute of Nuclear Power Operations (INPO), programs, coordinating and administering selected special projects having interdepartmental responsibilities, and performing other special assignments from the Vice President. The Projects and Assessment department is included in the IP Nuclear Program Quality Assurance Manual only to identify its position in the Nuclear Program organizational structure.

1.2.3 Quality Assurance Department

The Quality Assurance organization structure is shown in Figure 1-2. General responsibilities of the department with regard to the QA Program for the CPS include, but are not limited to, the following:

a. Prepare and control the IP Nuclear Program Quality Assurance Manual.

b. Verify the implementation of the IP Nuclear Quality Assurance Program.

c. If significant quality problems are identified, QA personnel have the authority and responsibility to stop specific work activities pending satisfactory resolution of the identified problem, provided the health and safety of the public or impact on the capability to safely operate or shut down the plant are not adversely affected.

d. Verify that quality-related training programs are developed and implemented for each company department that has responsibility for implementing the IP Nuclear Quality Assurance Program.

e. Review quality-related procurement requisitions and, as specified, condition reports, procedures, instructions and other quality-related documents.

f. Maintain awareness of QA requirements, practices and experiences throughout the nuclear power industry.

g. Develop and implement an audit, surveillance and inspection program for quality-related activities within the scope of the IP Nuclear Quality Assurance Program and routinely advise management of the status of program implementation. Initiate and/or verify corrective action, as necessary, to resolve conditions adverse to quality.

h. Perform acceptance inspections related to activities during operation and maintenance of CPS.

i. Review the QA programs of suppliers for compliance with regulatory requirements and the requirements of the IP Nuclear Quality Assurance Program when a program is required to be submitted by the procurement document. Ensure that supplier QA program deficiencies are corrected.

j. Review all changes to the USAR, with the exception of Chapter 16, Technical Specifications.

k. Perform trend analysis for detecting trends adverse to quality.

l. Extend portions of the IP Nuclear Quality Assurance Program to selected equipment important to reliable station operation but not included in the compliance based quality assurance program as directed by QA management.

1.2.3.1 Quality Engineering Section

The Quality Engineering Section is supervised by the Supervisor - Quality Engineering who reports to the Manager - Quality Assurance. The Quality Engineering Section assures documents, including on-site supplier documents, involving the following

activities conform to the applicable QA program requirements of regulations, standards, codes and other specific commitments: Operations, Maintenance, Plant Support, Technical, Chemistry, Radioactive Waste, Radiation Protection, Fire Protection, equipment included in the extended quality assurance program, Security, Modifications and Testing, Engineering activities, and USAR changes. This section performs quality verification planning for these activities, as applicable.

If significant quality problems are identified that warrant immediate action, Quality Engineering Section personnel have the authority and responsibility to stop the specific work activity pending satisfactory resolution of the identified problem, provided the health and safety of the public or impact on the capability to safely operate or shut down the plant are not adversely affected.

1.2.3.2 Quality Verification Section

The Quality Verification Section is supervised by the Supervisor - Quality Verification who reports to the Manager - Quality Assurance. The Quality Verification Section is responsible for scheduling, conducting and reporting the applicable inspection, verification, surveillance and nondestructive examination of quality-related items, processes, functions and activities associated with operations, testing, maintenance, modification, nuclear fuel, and plant support activities performed by IP which affect quality. The Quality Verification Section is also responsible for initiating reports of nonconforming items or conditions discovered during inspection activities. The section is responsible for advising management as to the effectiveness of quality assurance program implementation for those specific functions surveilled.

If significant quality problems are identified that warrant immediate action, Quality Verification Section personnel have the authority and responsibility to stop the specific work activity pending satisfactory resolution of the identified problem, provided the health and safety of the public or impact on the capability to safely operate or shut down the plant are not adversely affected.

1.2.3.3 Quality Systems Section

The Quality Systems Section is supervised by the Supervisor - Quality Systems who reports to the Director - Quality Assurance. The Quality Systems Section is responsible for periodically assessing departmental effectiveness in implementing the IP Nuclear Quality Assurance Program, trending of conditions adverse

to quality, coordination of Quality Assurance reviews and approvals of QA program requirements associated with the IP Nuclear Program Quality Assurance Manual and Corporate Nuclear Procedures, and advising management on matters related to establishment of quality programs and procedures for Clinton Power Station. The section is also responsible for the coordination and administration of QA training programs for department personnel and development and control of documents associated with the IP Nuclear Quality Assurance Program, such as the IP Nuclear Program Quality Assurance Manual and QA departmental procedures. The Quality Systems Section coordinates QA reviews and approvals of QA program requirements associated with the procedures of other Nuclear departments supporting Clinton Power Station, including, but not limited to: Nuclear Training Department, Nuclear Planning & Support Department, Licensing & Safety Department, Scheduling & Outage Management Department, and Projects and Assessment Department.

If significant quality problems are identified that warrant immediate action, Quality Systems Section personnel have the authority and responsibility to stop the specific work activity pending satisfactory resolution of the identified problem, provided the health and safety of the public or impact on the capability to safely operate or shut down the plant are not adversely affected.

1.2.3.4 Audit Section

The Audit Section is supervised by the Supervisor - Audits, who reports to the Director - Quality Assurance. The Audit Section is responsible for the planning and performance of internal and external IP audits. The Audit section assures that procurement documents contain the QA requirements of the USAR, evaluates suppliers' QA programs for meeting the USAR commitments, performs audits and surveys at suppliers' facilities, processes procurement related nonconformances, performs source surveillances and performs receipt inspections. The section ensures timely and responsive corrective action to IP audit findings and advises management as to the effectiveness of Quality Assurance program implementation for those specific functions audited.

If significant quality problems are identified that warrant immediate action, Quality Audits Section personnel have the authority and responsibility to stop the specific work activity pending satisfactory resolution of the identified problem, provided the health and safety of the public or impact on the capability to safely operate or shut down the plant are not adversely affected.

1.2.4 Organizational Interfaces

Activities affecting the quality of safety-related systems, structures and components are performed by, or under the cognizance of various IP organizations. Other sections of QA may perform some of the functions of another QA section provided that personnel are adequately trained, qualified/certified, and these work activities are performed to the same (or similar) procedures and instructions. Problems associated with meeting the requirements of the Quality Assurance program, or disagreements and/or disputes between members of these organizations shall be brought to the attention of appropriate levels of management, including the Chairman and CEO as necessary to obtain resolution.

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, operational controls with CPS Plant Staff and quality assurance with the Quality Assurance department. Prior to initiation of work, the qualified individual(s) or organizational elements within IP have their responsibilities identified for the control and quality of delegated work.

1.2.5 Nuclear Program Organization

FIGURE 1-1 illustrates Nuclear Program organizations having QA program responsibilities and interfaces.

FIGURE 1-2 illustrates the Quality Assurance Organizational Chart.

NUCLEAR PROGRAM ORGANIZATION AND INTERFACES

NOTES: UP-TO-DATE DEPARTMENTAL ORGANIZATION CHARTS AND FUNCTIONAL DESCRIPTIONS SHALL BE MAINTAINED AS PART OF DEPARTMENTAL DOCUMENTATION.

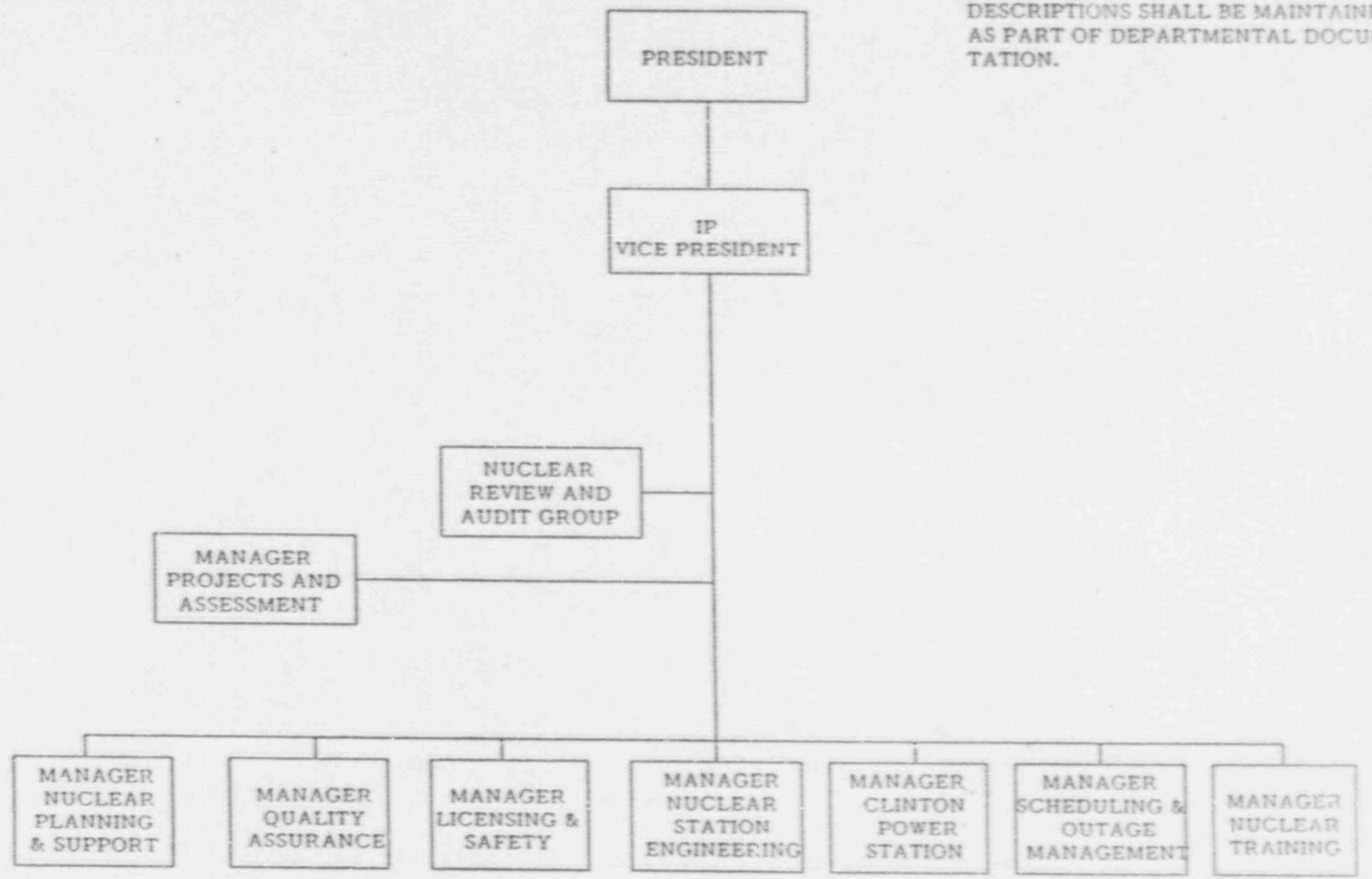

FIGURE 1-1

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04-12-90

ILLINOIS POWER QUALITY ASSURANCE ORGANIZATION

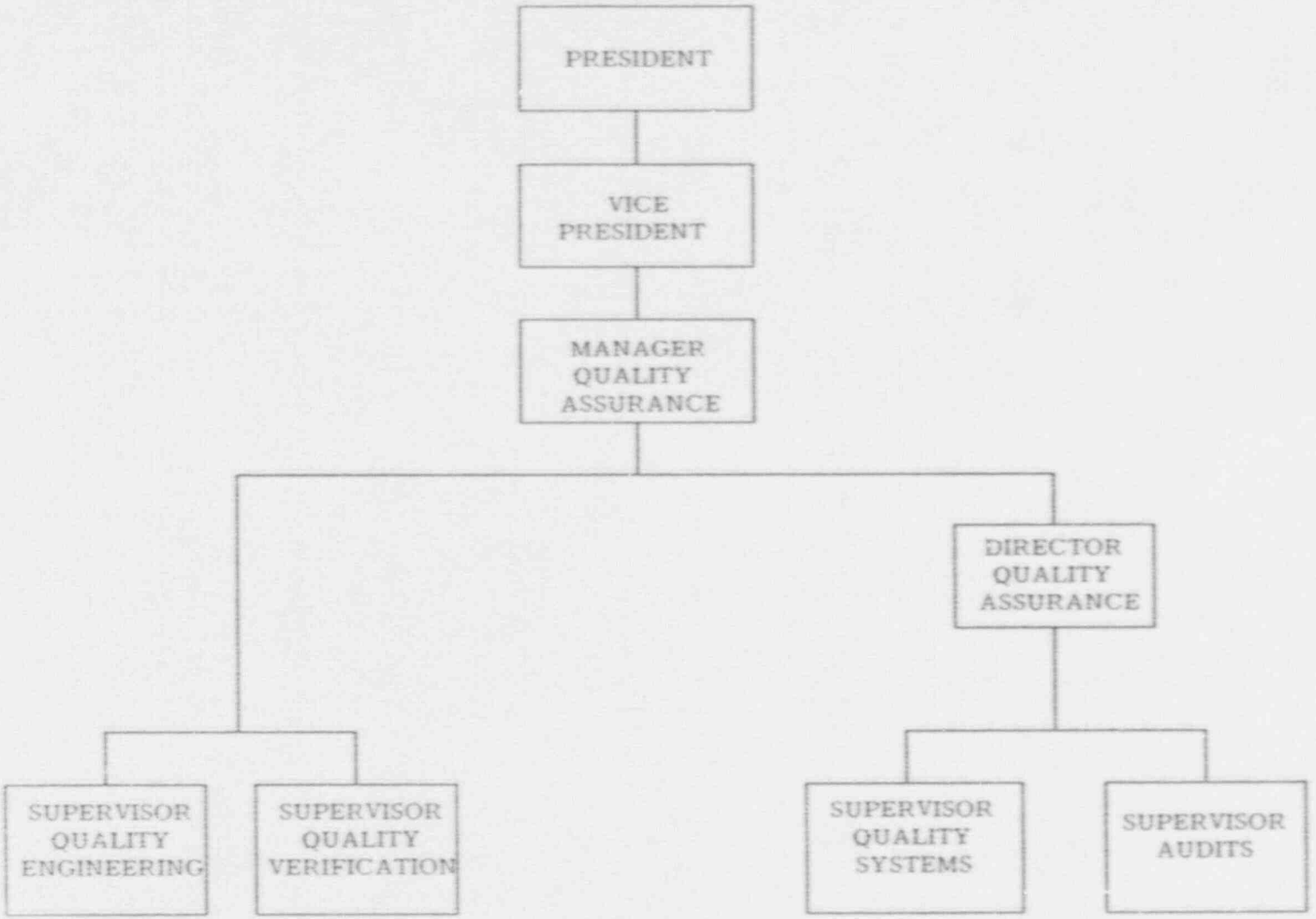

FIGURE 1-2

M.02182B

IP NUCLEAR PROGRAM
QUALITY ASSURANCE MANUAL

CHAPTER

2

QUALITY ASSURANCE PROGRAM

APPROVED BY: MANAGER-QUALITY ASSURANCE R. C. Wyatt

2.1 PURPOSE/SCOPE

The 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 table of systems, structures, and components is kept current and is revised and distributed as a controlled document in accordance with approved procedures. Appendix "B" to the IP Nuclear Program Quality Assurance Manual describes and specifies a graded application of the IP Nuclear Quality Assurance Program to certain other activities, systems and items at the Clinton Power Station, such as the pressure boundaries of radwaste augmented D systems, portions of the fire protection system, security system, environmental monitoring, and package and transportation of radioactive material.

2.2 DESCRIPTION

2.2.1 General

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, subpart H, "Quality Assurance for Packaging and Transportation of Radioactive Material" are also included. Additionally, in USAR section 1.8, Illinois Power is committed to carrying out the provisions of various NRC regulatory guides and industry standards which further define Quality Assurance program requirements. As used in this chapter, "Quality Assurance" comprises all those planned and systematic actions necessary to provide adequate confidence that a Clinton Power Station structure, system, or component will perform satisfactorily in service. Quality Assurance includes quality control which comprises those

physical characteristics of a 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 Quality Assurance Program Implementation

The IP Nuclear Quality Assurance Program was implemented as systems, structures, and components were turned over or transferred to IP. A Preoperational Test Program was established and implemented to assure that necessary inspection and testing of the transferred system, structure, or component was performed and properly evaluated, and to confirm that the system, structure or component will perform satisfactorily. The program coverage was gradually expanded until all applicable systems, structures, and components for the unit were turned over and were encompassed within the scope of the IP Nuclear Quality Assurance Program. The program has been fully implemented and will be maintained throughout the operating life of the plant.

The program receives ongoing reviews and is revised in accordance with Appendix A as necessary to assure its continued effectiveness. Changes made to the 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 controls previously established over activities affecting quality of CPS structures, systems, or components shall be submitted and approved by the NRC prior to change implementation. Quality Assurance Manual changes which do not reduce the Quality Assurance program's commitments shall be submitted to the NRC for review on an annual basis. Editorial changes or personnel reassignments of a non-substantive nature do not require NRC notification. Submittal to the NRC of a change to the IP Nuclear Program Quality Assurance Manual shall be in accordance with 10CFR50.54(a). The change submittal shall include all pages affected by that change and must be accompanied by a forwarding letter identifying the changes, the reason for the change, and the basis for concluding that the revised program incorporating the change continues to satisfy the criteria of 10CFR50 Appendix B and the Safety Analysis Report quality assurance program description commitments previously accepted by the NRC.

2.2.3 Quality Assurance Program Documentation

The IP Nuclear Quality Assurance Program is established and supported by three tiers of documents; each successive tier transmits requirements from a higher level of authority to the next successive lower document level.

a. Nuclear Policy Statements are documents issued by Corporate Management to promulgate authoritative management directives establishing and defining Quality Assurance policies within the Illinois Power Company Nuclear Program.

b.1 IP Nuclear Program Quality Assurance Manual describes the objectives, requirements, interface relationships, and assignment of responsibilities for accomplishing activities which affect the safety-related functions of systems, structures, or components. It contains the minimum requirements to be applied by IP and suppliers. The manual is approved and maintained current by the Manager - Quality Assurance. Managers and Directors of organizations performing activities within the scope of the program designate their acknowledgement of responsibilities and authorization for use within their organization by signature prior to approval of the manual by the Manager - Quality Assurance.

b.2 Corporate Nuclear Procedures (CNP) are documents developed, approved, and issued to provide corporate direction and policy pertaining to appropriate Nuclear Program Activities. CNPs are reviewed by the Manager - Quality Assurance for compliance with quality assurance requirements and are approved by corporate level management.

b.3 CPS Records Management Standards provide direction in the areas of records identification, preparation, collection/review, turnover/transfer, storage, preservation, and maintenance.

b.4 Inservice Inspection (ISI) Program Manual describes the ISI requirements for CPS and serves as the site standard for all CPS ISI Program activities.

c. Departmental Procedures or Instructions are developed, approved, and issued within each organization to further implement the requirements of Corporate Nuclear Procedures and the IP Nuclear Program Quality Assurance Manual. These departmental procedures or instructions provide more detailed direction to IP personnel engaged in Nuclear Program related activities. Table 2-1 identifies those IP Nuclear Program Quality Assurance manual chapters that are applicable to the IP Nuclear Program Departments within their scope of responsibility.

2.2.4 Training

Each Manager or Director 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.

2.2.5 IP Nuclear Quality Assurance Program Evaluations

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

Suppliers' Quality Assurance programs are reviewed, approved, and audited by the IP Quality Assurance organization for compliance with applicable rules, regulations, and IP Nuclear Program Quality Assurance Manual as set forth in the contract document. Approval of such programs in activities related to CPS is documented.

2.3 RESPONSIBILITIES

2.3.1 Vice President

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

2.3.2 Nuclear Program Departments

a. Implement and comply with the IP Nuclear Quality Assurance Program.

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

2.3.3. CPS Plant Staff

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

2.3.4 Nuclear Station Engineering

a. Establish and maintain a site document for implementing the ASME Section XI Inservice Inspection Program.

2.3.5 Nuclear Training

a. Establish, maintain and implement a licensed operator training program and a General Employee Training program.

2.3.6 Quality Assurance

a. Develop, approve, and maintain the IP Nuclear Program Quality Assurance Manual.

b. Review, approve, and audit suppliers' quality assurance programs for compliance with applicable rules, regulations, and this manual as set forth in the contract document.

c. Review all changes to the USAR, with the exception of Chapter 16, Technical Specifications.

d. Evaluate th[illegible] Nuclear Program Quality Assurance Manual change[illegible] for commitment reduction.

e. Submit IP Nuclear Program Quality Assurance Manual changes to the NRC as defined in Paragraph 2.2.2 of this chapter and in accordance with 10CFR50.54.

TABLE 2-1

This table identifies the IP Nuclear Program Quality Assurance manual chapters that are applicable to the IP Nuclear Program Departments. These organizations are responsible for developing and maintaining procedures/instructions to the extent and detail within the scope of their responsibilities. The Quality Assurance Department shall review selected departmental procedures/ instructions that implement the QA Program.

Nuclear Program Departments	IP Nuclear Program QA Manual Chapters																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CPS Plant Staff	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Nuclear Station Engineering	x	x	x	x	x	x	x	x	x	x	x		x		x	x	x	x
Nuclear Planning & Support	x	x		x	x	x	x	x					x	x	x	x	x	x
Nuclear Training	x	x		x	x	x	x	x							x	x	x	x
Scheduling & Outage Management	x	x		x	x	x	x	x							x	x	x	x
Licensing & Safety	x	x	x	x	x	x	x	x							x	x	x	x
Quality Assurance	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Projects and Assessment	x																	
Nuclear Review & Audit Group			x													x		x

CHAPTER 3

DESIGN CONTROL

APPROVED BY: MANAGER-QUALITY ASSURANCE Rawyatt 5/3/90

3.1 PURPOSE/SCOPE

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

Design control measures are established to assure modifications and 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 modifications are designed and implemented in accordance with applicable codes, standards and regulatory commitments.

The Nuclear Station Engineering Department has overall responsibility for design control activities at Clinton Power Station. These design control activities are managed within the context of the Nuclear Program Configuration Management Program, which also includes provisions for controlling hardware and software items (procedures, training, etc.) which comprise the configuration of Clinton Power Station and final design approval of changes or modifications for incorporation into the plant. Processing of a modification, 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.

Provisions of this program also ensure that each modification or design change receives a thorough safety evaluation, that meets regulatory commitments or ensures that the basis for not performing the safety evaluation is documented. If the change is determined to constitute "an unreviewed safety question", or to alter commitments contained in approved Safety Analysis Reports or the CPS Technical

Specifications, it shall be evaluated by established safety review committees and submitted for regulatory approval prior to implementation.

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 Nuclear Station Engineering or a qualified consultant-engineer is required to include the following considerations in the design of each modification:

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 or modification inspection and test acceptance criteria are included in the design documents or modification packages.

e. An evaluation to determine if the proposed design change or modification 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.

Additionally, 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, release, distribution 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.

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.

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, Nuclear Station Engineering may choose to conduct, or direct, additional independent design verifications.

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 operations.

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. The procurement documents shall require that the test procedure, including acceptance criteria, be submitted to Illinois Power or its designee for review and approval prior to performance of the test.

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

The entire design control process shall be subject to audits conducted by IP Quality Assurance, to ensure that design activities are implemented in accordance with program requirements.

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. Assure that the proposed design change affecting nuclear safety and associated safety evaluation has been reviewed by the Facility Review Group.

3.3.2 Nuclear Station Engineering

a. Develop and 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 modifications and design changes.

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

d. Providing "as built" information to the Nuclear Licensing and Safety Department for updating the USAR to current plant conditions.

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

f. Coordinate the processing of plant modifications, assigning control numbers, recording progress, confirming procedural compliance, recommending operational readiness of affected hardware and transmittal of completed design change packages to Nuclear Planning and Support for processing, maintenance and retention in the Central File.

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

3.3.3 Licensing and Safety

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

3.3.4 Quality Assurance

a. Review the authorizing work documents for implementing design changes for systems, components and structures and ensure that the IP Nuclear Quality Assurance Program requirements are incorporated.

b. Conduct periodic audits to determine that the design control and verification activities meet the requirements of the design control program.

CHAPTER

PROCUREMENT DOCUMENT CONTROL

APPROVED BY: MANAGER-QUALITY ASSURANCE R Cudyer 5/3/90

4.1 PURPOSE/SCOPE

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

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.

Purchase requisitions for materials, parts, components or services for CPS are originated by the CPS organization having a need for the material, part, component or service for the operation, maintenance, refueling, repair or modification of the plant.

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

a. Applicable specifications, drawings, quality control 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.

Technical and quality requirements for procurement of items and services are specified by the Nuclear Station Engineering Department. The Quality Assurance Department verifies appropriate quality requirements are specified. Purchase requisitions are approved by the Manager or Director of the originating organization or his designee and forwarded to Nuclear Planning and Support for subsequent processing.

Based on the approved purchase requisition, Nuclear Planning and Support prepares the necessary purchase orders or contract documents. Prior to release of the purchase order or contract, Quality Assurance performs a review to ensure the requirements ("a" through "f" above) have been met. Nuclear Planning and Support places orders or contracts 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 for placement on the Qualified Suppliers List by QA, the supplier's technical capabilities by the Nuclear Station Engineering Department and the supplier's commercial ability by Nuclear Planning and Support.

Changes, revisions or amendments to requisitions and procurement documents, except as discussed below, are subject to the same requirements as was the original document. The following changes, revisions or amendments require Nuclear Planning and Support department approval only: a) quantity, b) estimated price, c) cost codes, d) taxes, e) format and editorial changes (such as spelling or typing errors) and commercial terms and conditions.

The IP Quality Assurance department conducts periodic audits to ensure that procurement activities are implemented in accordance with program requirements.

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.

Technical and quality requirements for procurement of items and services are specified by the Nuclear Station Engineering Department. The Quality Assurance Department verifies appropriate quality requirements are specified. Purchase requisitions are approved by the Manager or Director of the originating organization or his designee and forwarded to Nuclear Planning and Support for subsequent processing.

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Changes, revisions or amendments to requisitions and procurement documents, except as discussed below, are subject to the same requirements as was the original document. The following changes, revisions or amendments require Nuclear Planning and Support department approval only: a) quantity, b) estimated price, c) cost codes, d) taxes, e) format and editorial changes (such as spelling or typing errors) and commercial terms and conditions.

The IP Quality Assurance department conducts periodic audits to ensure that procurement activities are implemented in accordance with program requirements.

4.3 RESPONSIBILITIES

4.3.1 Nuclear Program Departments

a. Initiate purchase requisitions for materials, parts, components or services for CPS.

4.3.2 Nuclear Planning and Support

a. Review purchase requisitions for completeness.

b. Prepare purchase orders/contracts for award to qualified suppliers.

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 procurement.

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

d. Evaluate suppliers for technical ability to perform.

4.3.4 Quality Assurance

a. Verify appropriate quality requirements are specified for materials, parts, components or services for CPS.

b. Review and approve supplier quality assurance programs.

c. Conduct periodic audits of the procurement document control program to ensure compliance with the requirements of this chapter.

IP NUCLEAR PROGRAM QUALITY ASSURANCE MANUAL

CHAPTER 5

~~INSTRUCTIONS, PROCEDURES~~ & DRAWINGS

APPROVED BY: MANAGER-QUALITY ASSURANCE R.E. Campbell 2/14/89

5.1 PURPOSE/SCOPE

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

Each IP department is responsible for developing, reviewing, approving, issuing 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.

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. Table 2-1 identifies those IP Nuclear Program Quality Assurance manual chapters that are applicable to the IP Nuclear Program Departments within their scope of responsibility.

The IP Quality Assurance department conducts periodic surveillances and audits to determine that appropriate instructions, procedures, or drawings exist and to evaluate their adequacy and implementation.

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5.3 RESPONSIBILITIES

5.3.1 Nuclear Program Departments

a. Develop, approve, issue 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.

5.3.2 Quality Assurance

a. Conduct periodic surveillances and audits to verify that appropriate instructions, procedures and drawings exist and are being implemented in accordance with the requirements of this chapter.

b. Review selected CPS departmental procedures and instructions for QA program requirements.

CHAPTER 6

APPROVED BY: MANAGER-QUALITY ASSURANCE R. E Wyatt 5/3/90

6.1 PURPOSE/SCOPE

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

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. Temporary changes to CPS procedures required by the Technical Specifications which do not change the intent of the approved procedures shall, as a minimum, be approved by two members of the unit management staff who are knowledgeable in the areas affected by the procedures. At least one of these individuals shall be the supervisor in

charge of the shift and hold a senior operator license. Such changes shall be documented, reviewed and approved in accordance with the CPS Operating License Manual, and if appropriate, incorporated in the next revision of the affected procedure.

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

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

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

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

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

i. Current distribution lists are established and used.

Types of documents to be controlled as described above include:

a. IP Nuclear Program Quality Assurance Manual which contains the basic description, requirements and assignment of responsibilities for the IP Nuclear Quality Assurance Program. The QA manual is developed, approved and maintained by the Manager - Quality Assurance.

b. Corporate Nuclear Procedures which provide corporate instruction and policies pertaining to Nuclear Program activities.

c. CPS Operating License Manual contains the technical specifications that are an integral part of the Clinton Power Station operating license.

d. Station Operating Manual which contains procedures for the operation, maintenance and testing of the plant by the CPS organization. These procedures are subject to a well-defined and documented preparation, review, approval, change control and distribution process.

e. CPS Records Management Standards which provide direction for records identification, preparation, collection/review, turnover/transfer, storage, preservation and maintenance.

f. Inservice Inspection Program Manual which describes the ISI requirements for CPS and serves as the site standard for all CPS ISI Program activities.

g. Other controlled documents, such as: the Nuclear Policy Statements, USAR, corrective action documents, as-built drawings, procedures and/or instructions used by IP Nuclear Program Departments.

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 approving the receipted documents for use in activities associated with CPS by that organization.

c. A program for distribution and control.

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.

The IP Quality Assurance department conducts periodic surveillances and audits of document control systems to ensure compliance with the specified requirements.

6.3 RESPONSIBILITIES

6.3.1 Nuclear Program Departments

a. Review, approve and distribute controlled documents generated in accordance with appropriate procedures.

b. Employ appropriate measures to receive, record and redistribute controlled documents from other organizations.

6.3.2 Nuclear Planning and 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.

6.3.3 Quality Assurance

a. Conduct periodic surveillances and audits of document control systems to ensure compliance with the requirements of this chapter.

CHAPTER

7

CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

APPROVED BY: MANAGER-QUALITY ASSURANCE R. Widgets

7.1 PURPOSE/SCOPE

To define the requirements and responsibilities for programs that assure purchased material, equipment, and services conform to procurement requirements.

7.2 DESCRIPTION

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 inspections of the product at the source and/or upon receipt at CPS.

IP procurement procedures require a review of material, equipment and services requisitions for safety-related structures, systems, and components by the Nuclear Station Engineering Department. 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. Nuclear Station Engineering is responsible for performing the necessary reviews and evaluations of the procurement source's capability to meet the technical requirements of the procurement documents.

The Quality Assurance department specifies the Quality Assurance program requirements that must be met by suppliers. Quality Assurance is responsible for performing the necessary reviews and evaluations of the procurement source's Quality Assurance program and ability to meet the quality assurance requirements of the procurement documents. Where necessary, the determination of a supplier's acceptability includes information obtained through audits of the supplier by the Quality Assurance organization. Such audits are performed in accordance with a written plan or

checklist to determine the ability of suppliers to comply with Quality Assurance program requirements of the procurement document. The determination of a supplier's acceptability may be made by means other than by audits of the supplier by Quality Assurance. 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 indicates 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, Quality Assurance will conduct a survey or an audit of the supplier. The Quality Assurance department is responsible for maintaining the Qualified Suppliers List.

In addition to reviewing a supplier's capability to meet the commercial requirements of the procurement documents, Nuclear Planning and Support is assigned the responsibility of ascertaining that the required technical and quality assurance reviews and evaluations have been completed satisfactorily prior to contract award or release of the purchase order. The results of these reviews and evaluations are documented.

Following the award of the contract or placement of the purchase order, the Quality Assurance organization is responsible for performing periodic surveillances and evaluations at the supplier's facility, as necessary, to verify continued compliance with the quality assurance requirements of the procurement documents. The results of these surveillances and evaluations are documented. Where specified in the purchase order or contract, source inspections at the supplier's facility are accomplished by the Quality Assurance organization or qualified agent to verify that the procured item or service is being supplied in compliance 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.

Upon receipt at CPS, Nuclear Planning and Support is responsible for the control of safety-related materials, parts, and components. Quality Assurance inspection personnel are responsible for inspecting, releasing, and identifying purchased material and equipment as to the inspection status as required by the purchase order.

After receipt inspection, storeroom personnel of Nuclear Planning and Support are responsible for forwarding the purchased material to a controlled storage area or releasing it for installation or further work. Personnel from other departments also perform 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. When these activities are accomplished, QA personnel verify that those acceptance activities were accomplished prior to final acceptance of an item. Receipt inspections are accomplished in accordance with written procedures and/or plans containing or referencing appropriate acceptance criteria.

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.

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.

The Quality Assurance department conducts periodic surveillances and audits of the control measures applied to purchased materials, equipment, and services to determine the effectiveness in meeting the specified requirements. Quality Assurance audits of suppliers evaluate the adequacy and effectiveness of suppliers' systems and procedures for preparing certificates of conformance, as well as the adequacy of supporting documentation and records.

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.

7.3.2 Nuclear Station Engineering

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

b. Perform technical reviews and evaluations of suppliers' capabilities to meet procurement technical requirements prior to release of the purchase order or contract.

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

7.3.3 Nuclear Planning and Support

a. Review requisitions for completeness.

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

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

d. Provide materials or equipment requiring receipt inspection to Quality Assurance for acceptance prior to issuing the material or equipment for operation.

e. Develop and implement procedures for the receiving, storing, and issuing of purchased items.

7.3.4 Quality Assurance

a. Perform source evaluations and audits, as necessary, of suppliers' quality assurance programs prior to release of the initial purchase order or award of contract.

b. Perform periodic surveillances and evaluations at suppliers' facilities, as necessary, to verify continued compliance with quality requirements of procurement documents.

c. Conduct periodic surveillances and audits of the control measures applied to purchased materials, equipment, and services to ensure compliance with the requirements of this chapter.

d. Perform and document source inspections, as necessary, at the suppliers' facilities to verify that procured items or services are in compliance with the requirements of the procurement documents.

e. Perform and document receipt inspection of purchased items, including verifying the required documentary evidence of conformance to procurement requirements is available at CPS and verifying activities of other groups are accomplished prior to final acceptance of an item and release for use.

f. Review purchase requisitions and specify the quality assurance program requirements for the item(s) to be procured.

g. Perform surveillances or inspections, as required, on procured services prior to acceptance.

h. Maintain the Qualified Suppliers List current based on the results of evaluations or audits.

CHAPTER 8

IDENTIFICATION AND CONTROL OF MATERIALS, PARTS AND COMPONENTS

APPROVED BY: MANAGER-QUALITY ASSURANCE R.E. Campbell 2/14/89

8.1 PURPOSE/SCOPE

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

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 items of purchase.

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.

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.

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

The CPS Plant Staff is responsible for identification and control of material, parts, and components during fabrication, maintenance and modification activities performed by at CPS. Nuclear Planning and Support is responsible for identification and control of material, parts, and components during receipt and storage at CPS. The IP department responsible for supplier work at CPS is responsible for insuring that identification and control of materials, parts, and components by the supplier are in accordance with applicable procedures.

The IP Quality Assurance Department conducts verification inspections and periodic surveillances and audits to assure that identification and control of materials, parts, and components are in compliance with program requirements.

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

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

8.3.3 Nuclear Planning and Support

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

8.3.4 Quality Assurance

a. Ensure that suppliers comply with approved procedures.

b. Conduct verification inspections and periodic surveillances and audits of the identification and control of items to ensure compliance with the requirements of this chapter.

CHAPTER 305

CONTROL OF SPECIAL PROCESSES

APPROVED BY: MANAGER-QUALITY ASSURANCE R Andrykat 5/3/90

9.1 PURPOSE/SCOPE

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

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 obtained through a combination of inspection and reliance on personnel qualification and procedural control, as appropriate, for the process being conducted. 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.

Special processes include welding, heat treatment, nondestructive examination (testing), chemical cleaning, pipe bending, and special coatings.

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.

Special process procedures shall be submitted to Nuclear Station Engineering for review and approval 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.

Nuclear Station Engineering specifies special processes in technical documents and procurement requisitions. The control of scheduled ISI examinations and inspections is the responsibility of the Nuclear Station Engineering Department. The control of other special processes is the responsibility of CPS Plant Staff. The control of NDE to support plant operations is the responsibility of the QA department.

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 by IP Quality Assurance personnel 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.

The Quality Assurance department conducts inspections, surveillances, and audits of special processes, including qualification of processes, equipment, and personnel to ensure compliance with appropriate codes, standards, specifications, procedures, and the IP Nuclear Program Quality Assurance Manual.

9.3 RESPONSIBILITIES

9.3.1 CPS Plant Staff

a. Establish and maintain a program to qualify special process procedures and equipment, except NDE required for plant operations.

b. Establish and maintain a program to qualify personnel to perform special processes, except NDE required for plant operations.

c. Incorporate into 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.

9.3.3 Quality Assurance

a. Review NDE procedures, including those of suppliers.

b. Establish and maintain a program to qualify procedures, equipment, and personnel for NDE.

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

d. If radiography is performed by IP, maintain the required NRC license for radioactive source material.

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

f. Conduct periodic surveillances and audits of special processes and controls, including qualification of process, equipment, and personnel, whether performed by CPS Plant Staff or suppliers to ensure compliance with approved procedures.

CHAPTER

INSPECTION

APPROVED BY: MANAGER-QUALITY ASSURANCE R.E. Campbell 2/14/89

10.1 PURPOSE/SCOPE

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. The independent inspections performed are not intended to diminish or replace the clear responsibility of first line supervisors for the quality of work performed under their supervision.

10.2 DESCRIPTION

In order to assure safe and reliable operation, programs of inspections are established at CPS which includes 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 written inspection procedures and documented 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 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 the proper type, range, and accuracy of inspection instrument(s) used for each operation;

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

6. Qualification requirements of inspection personnel; and

7. Provisions for recording inspection data and results.

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

d. Where direct 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.

The Quality Assurance department is responsible for inspection of plant structures, systems, and components. The Nuclear Station Engineering department is responsible for scheduled ISI Program examinations and inspections. Inspections conducted include: maintenance and modification inspection, receipt inspection, new fuel inspection, inspections of surveillance tests, inspections of functional and preoperational tests, ISI examinations and inspections, and housekeeping inspection. The Quality Assurance department is responsible for evaluating and determining the acceptability of inspection results in accordance with specified inspection criteria. The Nuclear Station Engineering department is responsible for evaluating and determining the acceptability of scheduled ISI Program examination and inspection results. The Quality Assurance department and the Nuclear Station Engineering department may use the services of other IP department personnel or may engage the services of external organizations to accomplish any inspections, evaluations or reviews of inspection and test results.

Suppliers are responsible for establishing and implementing inspection programs necessary to meet the requirements specified in the procurement documents. The need to invoke the requirements of ANSI N45.2.6 on suppliers is evaluated by the Quality Assurance department and the Nuclear Station Engineering department during the review of procurement documents for items and services. The complexity of the item and the extent of source and receipt inspection are factors which are considered when determining whether or not to invoke ANSI N45.2.6.

IPQA conducts periodic surveillances and audits of the various established inspection programs and their implementation to ensure compliance with the provisions described in items "a" through "e" above.

10.3 RESPONSIBILITIES

10.3.1 CPS Plant Staff

a. Develop and implement a program that provides for inspection of work operations performed at CPS.

10.3.2 Nuclear Station Engineering

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

b. Specify inspection and acceptance criteria for nondestructive examination in work documents.

c. Develop and implement an inspection program for scheduled ISI Program examinations and inspections.

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

10.3.3 Quality Assurance

a. Develop and implement an inspection program for CPS.

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

c. Verify through surveillances and audits that suppliers performing work at CPS are in compliance with the approved inspection program.

d. Conduct periodic surveillances and audits of inspection programs to ensure compliance with the requirements of this chapter.

CHAPTER 305

11 TEST CONTROL

APPROVED BY: MANAGER-QUALITY ASSURANCE R G Wyatt 5/3/90

11.1 PURPOSE/SCOPE

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

The IP Nuclear Quality Assurance Program addresses 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.

Test programs are developed to assure that the required tests are performed in accordance with approved written 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.

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 CPS Plant Staff

a. Develop and 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. Perform the required tests.

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

f. Review and approve post-maintenance test results.

g. Review and approve post-modification test results.

11.3.2 Nuclear Station Engineering

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

b. Review and approve post-modification and/or special test results as detailed in approved procedures.

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

11.3.3 Quality Assurance

a. Review and approve test procedures to assure that QA requirements are included.

b. Approve test results as specified in the implementing procedures.

c. Conduct periodic surveillances and audits of the test program and to ensure the test program complies with the requirements of this chapter.

CHAPTER 12

CONTROL OF MEASURING AND TEST EQUIPMENT

APPROVED BY: MANAGER-QUALITY ASSURANCE R.E. Campbell 2/14/89

12.1 PURPOSE/SCOPE

To define the measures and responsibilities to assure tools, gauges, instruments, and other measuring and testing devices (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

M&TE is procedurally defined as 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.

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 supervisors.

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 and 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.

CPS Plant Staff is assigned the responsibility for establishing and implementing the program 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 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.

The IP Quality Assurance organization conducts periodic surveillances and audits of the controls applied to measuring and test equipment to determine compliance with the provisions described in items "a" through "j" above.

12.3 RESPONSIBILITIES

12.3.1 CPS Plant Staff

a. Develop and implement programs to control the use of M&TE used at CPS.

b. Develop and 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.

d. Develop and implement programs to control the use of installed instrument and control devices.

12.3.2 Quality Assurance

a. Review the M&TE control program of suppliers performing work at CPS.

b. Conduct periodic surveillances and audits of the controls applied to M&TE and installed instrument and control devices to determine compliance with the requirements of this manual.

CHAPTER 13

HANDLING, STORAGE AND SHIPPING

APPROVED BY: MANAGER-QUALITY ASSURANCE R Campbell 5/3/90

13.1 PURPOSE/SCOPE

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

The IP Nuclear Quality Assurance Program includes procedures which assure special handling, preservation, storage, cleaning, packaging and shipping requirements are accomplished by trained individuals in accordance with plant procedures to prevent damage or deterioration. The procedures will 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 IP through appropriate technical and procurement documents, suppliers may also be required to provide information to Nuclear Planning & Support related to the proper handling, storage and shipping of furnished materials, parts and components. Nuclear Planning & Support uses this information for the development of the storage and handling procedures and instructions to be applied to an item.

The procedures and instructions will 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.

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.

The Quality Assurance department conducts periodic surveillances, audits and document reviews to determine if appropriate procedures and controls are being applied regarding handling, storage and shipping of materials and equipment.

13.3 RESPONSIBILITIES

13.3.1 CPS Plant Staff

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

b. Develop and implement programs to control the handling, storage and shipping of radioactive 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 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 Planning and Support

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

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

c. Develop and 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.

13.3.4 Quality Assurance

a. Conduct periodic surveillances, audits and document reviews to verify that appropriate procedures and controls are being implemented in accordance with the requirements of this chapter.

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INSPECTION, TEST AND OPERATING STATUS

APPROVED BY: MANAGER-QUALITY ASSURANCE R W Wyatt 5/3/90

14.1 PURPOSE/SCOPE

To define the requirements and responsibilities for identifying the inspection, testing and operational 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

The 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 effects on the items.

b. Assurance that required inspections or tests are not inadvertently bypassed. In cases where required documenting evidence is not available, the associated equipment or materials must be considered nonconforming in accordance with Chapter 15 of the QA

Manual. Until suitable documenting 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.

CPS Plant Staff is responsible for indicating the test and operating status of materials, parts, components and assemblies at CPS. Nuclear Planning and Support is responsible for maintaining inspection and test status of items in storage. Quality Assurance is 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. CPS Plant Staff and the QA department review and approve the programs of suppliers performing work at CPS to ensure compatibility with the CPS status indication system.

The Quality Assurance department conducts periodic surveillances and audits to determine implementation and adequacy of measures used to indicate inspection, test and operating status to meet the requirements of the IP Nuclear Quality Assurance Program.

14.3 RESPONSIBILITIES

14.3.1 CPS Plant Staff

a. Develop and 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. Establish and implement procedures and control the status of radiological samples.

14.3.2 Nuclear Planning and Support

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

14.3.3 Quality Assurance

a. Review and approve the programs of suppliers performing work at CPS to ensure compatibility with the various status indicating systems.

b. Develop and implement programs to indicate receipt inspection status of materials, parts and components.

c. Develop and implement programs to indicate status of nonconforming items.

d. Conduct periodic surveillances and audits of the implementation and adequacy of programs used to indicate inspection, test and operating status to ensure compliance with the requirements of this chapter.

CHAPTER 15

NONCONFORMING MATERIALS, PARTS OR COMPONENTS

APPROVED BY: MANAGER-QUALITY ASSURANCE R.E. Campbell 2/14/89

15.1 PURPOSE/SCOPE

To describe the measures established and implemented to control items, services or activities which do not conform to requirements, and the measures to control further processing, delivery or installation of nonconforming or defective items.

15.2 DESCRIPTION

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, they 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, are 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 and reviewed by the Quality Assurance Department.

j. Reports documenting nonconforming items are reviewed by the Quality Assurance department prior to close-out to verify that the nonconformances were properly documented, dispositioned, corrected and inspection and/or acceptance verification is completed.

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 nonconformance. These items shall be controlled in accordance with approved procedures.

Installed items not inservice 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.

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.

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

Procurement documents require that suppliers have similar measures established for the identification, control, and dispositioning of nonconformances and that recommended dispositions of "use-as-is" or "repair" must be reported to IP for approval.

The IP Quality Assurance department conducts periodic surveillances and audits of the programs instituted for the identification and control of nonconformances to ensure compliance with the requirements of the IP Nuclear Quality Assurance Program.

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 departments activities as described in this chapter of the QA manual.

15.3.3 CPS Plant Staff

a. Authorize the conditional release of items.

b. Evaluate and document, together with NSED, the safety significance of nonconforming items.

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

15.3.4 Nuclear Planning & Support

a. Establish and implement an effective program for processing supplier nonconformance reports.

15.3.5 Nuclear Station Engineering

a. Establish and implement a program for dispositioning nonconforming items that ensure "use-as-is" or "repair" dispositions are approved by the appropriate design organization.

b. Evaluate and document, together with Plant Staff, 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 Quality Assurance

a. Establish and implement a program for verifying acceptable disposition implementation as required by the disposition of nonconformances.

b. Establish and implement programs for the review of nonconformances to verify effectiveness in meeting the requirements of this chapter.

c. Perform review of conditional release justifications.

d. Ensure that procurement documents require suppliers to establish a nonconformance program consistent with this chapter.

e. Conduct periodic surveillances/audits of the Nonconformance Program at CPS to ensure compliance with the requirements of this chapter.

15.3.7 Facility Review Group

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

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CHAPTER 16

CORRECTIVE ACTION

APPROVED BY: MANAGER-QUALITY ASSURANCE R.E. Campbell 2/14/89

16.1 PURPOSE/SCOPE

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

Each 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 will be reported to Plant Operations personnel for assessment of operational impact. Reporting may be accomplished through various reporting documents as defined in documented 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.

The IP Quality Assurance Department performs trend analysis on conditions adverse to plant safety and/or quality to determine if a trend representing a significant condition adverse to plant safety and/or quality exists. Nuclear Station Engineering performs trend analysis of conditions documented on maintenance work documents to identify equipment failure and reliability concerns. 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.

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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 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 will be documented and reported to appropriate levels of management.

Corrective action is evaluated by the Quality Assurance Department 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 by the Nuclear Review and Audit Group. 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. Establish and 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 followup to verify implementation of corrective action.

16.3.3 Plant Staff

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

16.3.4 Quality Assurance

a. Establish and administer a trend analysis program for conditions adverse to plant safety and/or quality.

b. Evaluate corrective action to determine its effectiveness.

c. Conduct periodic surveillances and audits of the corrective action program to ensure compliance with the requirements of this chapter.

16.3.5 Nuclear Station Engineering

a. Perform trend analysis of conditions documented on Maintenance Work Requests to identify equipment failure and reliability.

16.3.6 Nuclear Review and Audit Group

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

CHAPTER 17

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QUALITY ASSURANCE RECORDS

APPROVED BY: MANAGER-QUALITY ASSURANCE R Campbell 5/3/90

17.1 PURPOSE/SCOPE

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 Clinton Power Station.

17.2 DESCRIPTION

Sufficient records, identifiable to the item or activity to which they apply, filed in an orderly manner and retrievable are maintained by Nuclear Planning and Support Department, Records Management Group, in the records storage facilities.

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.

Departments generating records or departments receiving records from other departments or suppliers transfer them to Nuclear Planning and Support, Records Management Group, for retention. The Records Management Group processes (indexes, microfilms, etc.) and maintains the records for retention in the records storage facilities. 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 IP after the suppliers no longer plan to keep them.
The retention times for the various quality assurance records are in accordance with applicable requirements including 10CFR50, Technical Specifications 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. Nuclear Planning and Support is responsible for the definition and implementation of activities related to records.

The Quality Assurance department conducts periodic audits of records systems to ensure compliance in meeting the IP Nuclear Quality Assurance Program requirements.

17.3 RESPONSIBILITIES

17.3.1 Nuclear Program Departments

a. Develop and implement departmental procedures or instructions for records preparation, collection, review, turnover/transfer, receipt, retention and retrieval which implement the Records Management Program and Standards.

b. Transfer completed Quality Assurance records to Nuclear Planning and Support Records Management Group for processing, maintenance and retention.

17.3.2 Nuclear Planning and 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.), maintain and retain QA 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.

17.3.3 Quality Assurance

a. Conduct periodic audits of records systems to ensure compliance with the requirements of this chapter.

CHAPTER

18
AUDITS

APPROVED BY: MANAGER-QUALITY ASSURANCE R Cuyatt 5/3/90

18.1 PURPOSE/SCOPE

To define the requirements and responsibilities for implementing the program of planned and periodic audits which shall verify compliance with the quality assurance program and determine the effectiveness in meeting program objectives.

18.2 DESCRIPTION

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

a. Provisions are made for both internal and external audits.

b. Audits include the full range of activities within the scope of the IP Nuclear Quality Assurance Program. Additionally, QA program audits include indoctrination and training programs; interface control between IP, the audited organizations and other affected organizations; USAR commitments; and Technical Specification requirements.

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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 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.

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. Followup action (including re-audits) is taken to verify that corrective action has been completed and the resolution documented.

Within the Quality Assurance organization, the Supervisor - Audits has the responsibility for maintaining and implementing an audit plan which verifies that applicable elements of the Quality Assurance program have been developed, documented, and implemented in accordance with the requirements of this manual. Audits will be initiated as early in the life of the activity as practicable consistent with the schedule for accomplishing the activity to assure timely implementation of the quality assurance requirements. The plan is reviewed periodically to insure that it is current and 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.

Audited organizations are required to review and provide timely written response to audit reports stating corrective action taken or planned to correct deficient areas and prevent recurrence. Audit program requirements are imposed on suppliers by appropriate contract or procurement documents.

Reports of internal audits are forwarded to the Nuclear Review and Audit Group and the Independent Safety Engineering Group for program

evaluation. IP Management obtains an independent audit of the IP Quality Assurance Organization on an annual basis.

18.3 RESPONSIBILITIES

18.3.1 Nuclear Program Departments

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

18.3.2 Licensing and Safety

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

18.3.3 Nuclear Review and Audit Group

a. Review reports of internal audits for program evaluation.

18.3.4 Quality Assurance

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

b. Implement an external audit program and audit suppliers performing activities within the scope of the IPQA program to verify compliance with the suppliers' respective quality assurance programs, contract, specifications and requirements.

c. Coordinate for the Vice President the performance of independent audits of the QA organization.

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

APPENDIX A

REVISIONS TO THE IP NUCLEAR PROGRAM
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Revisions to the IP Nuclear Program Quality Assurance Manual may be issued by either, or a combination of two ways: whole page replacements, or directions to manual holders to make pen and ink changes. Revisions are noted by a sequential number (the original issue is designated REVISION 0 with subsequent issues as REVISIONS 1, 2, 3, etc.) and by the DATE of issue in the lower right hand corner of the page.

The Quality Assurance Department shall approve distribution of the IP Nuclear Program Quality Assurance Manual and all revisions thereto. Manuals may be distributed as either controlled or uncontrolled copies. Controlled manual holders will receive all revisions to the manual. Revisions will not be routinely sent to holders of uncontrolled manuals. Persons assigned custody of controlled copies of the manual are responsible for maintaining the manual in accordance with the following:

1. For each revision issued, the manual holder will receive the revised material, an updated List of Effective Pages and an accompanying transmittal letter providing instructions for the recipient to follow in updating the manual and reporting receipt and compliance with updating instructions.

2. When revised material is provided, the obsolete material shall be removed and destroyed by the manual holder.

3. Requests for copies of the IP Nuclear Program Quality Assurance Manual or recommendations for revisions or corrections should be directed to the Manager - Quality Assurance in writing from the manager of the requesting organization. The precise change or revision and the reason/justification for the recommendation should be addressed.

Proposed revisions to the IP Nuclear Program Quality Assurance Manual will be sent to affected department managers and/or directors for their review prior to issuance by the Manager - Quality Assurance.

APPENDIX B

SUPPLEMENTAL APPLICATION
IP NUCLEAR QUALITY ASSURANCE PROGRAM

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
Package 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 Clinton Power Station 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 Operations) - 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.

The extent to which the IP Nuclear 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 Package and Transportation of Radioactive Material.

MATRIX

CHAPTERS OF THE IP NUCLEAR PROGRAM
QUALITY ASSURANCE MANUAL
APPLICABLE TO FIRE PROTECTION, SECURITY, ENVIRONMENTAL,
AND RADWASTE/AUGMENTED D, AND PACKAGE
AND TRANSPORTATION OF RADIOACTIVE MATERIAL

OPERATIONAL QA MANUAL CHAPTER	FIRE PROTECTION	SECURITY	ENVIRONMENTAL	RADIOACTIVE WASTE/ AUGMENTED D	PACKAGE 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 the nature of the item. This determination shall be made jointly by Engineering and Quality Assurance 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 and quality assurance organizations 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.

PACKAGE AND TRANSPORTATION OF RADIOACTIVE MATERIAL

Chapter 1 - Applicable

Chapter 2 - Applicable

Chapter 3 - Applicable

Chapter 4 - Applicable

Chapter 5 - Applicable

Chapter 6 - Applicable

Chapter 7 - Applicable

Chapter 8 - Applicable

Chapter 9 - Applicable

Chapter 10 - Applicable

Chapter 11 - Applicable

Chapter 12 - Applicable

Chapter 13 - Applicable

Chapter 14 - Applicable

Chapter 15 - Applicable

Chapter 16 - Applicable

Chapter 17 - Applicable

Chapter 18 - Applicable

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 flow-rate 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 jointly by Engineering and Quality Assurance 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 and quality assurance organizations 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 - 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