ATTACHMENT A

CONSUMERS POWER COMPANY

Significant changes made to Topical Report CPC-2A, "Quality Assurance Program Description for Operational Nuclear Power Plants" are as follows:

PAGE	SECTION/FIGURE	CHANGES
3	1.2.2.c	Deleted "and qualifications from responsibilities."
3 and 4	1.2.2.b and d	Revised to respond to Technical Specification changes for independent review body.
3	1.2.2.e	Deleted "long term planning and administrative functions."
5	1.2.3.c	Added interfaces between VP-PE&C and VP-NO.
7	1.2.4.e,f,h and i	Revised to reflect organization change pertaining to GO - Document Control Center and Fossil Operations support services.
9	1.2.5.a	Added responsibility for QA Superintendent.
15	Figure 2	Revised to reflect organizational changes in Fossil Operations.
16	Figure 3	Revised to respond to Technical Specification change for independent review body.
20	Figure 7	Revised to reflect title change.
64	18.2.11	Revised to respond to Technical Specification changes for independent review body.
67-70	Appendix A, Part 2	Significant revisions here were made to reflect the Technical Specification changes for the independent review body.

QUALITY ASSURANCE PROGRAM DESCRIPTION
FOR
OPERATIONAL NUCLEAR POWER PLANTS
Revision 1

APPROVED BY:

D. W. Wamm
Executive Vice President, Energy Supply — 7/22/82 Date

R B Dewitt
Vice President, Nuclear Operations — 7/9/82 Date

J W Cook
Vice President, Projects, Engineering and Construction — 7/22/82 Date

C C Bibby
Vice President, Fossil Operations — 7/7/82 Date

G. T. Hevis
Vice President, System Operations — 7-8-82 Date

B. F. Wallace
Vice President, Fuel Supply — 7-8-82 Date

R Lurie
Vice President, General Services — 7/7/82 Date

QUALITY ASSURANCE PROGRAM DESCRIPTION
FOR
OPERATIONAL NUCLEAR POWER PLANTS

CONTENTS

1.0 ORGANIZATION

1.1 POLICY

Consumers Power Company (CP Co) is responsible for establishing and implementing the Quality Assurance Program for the operational phase of its nuclear power plants. Although authority for development and execution of some parts of the program is delegated to others, such as contractors and consultants, CP Co retains overall responsibility.

This section of the Quality Assurance Program Description (QAPD) identifies the CP Co organizational responsibilities for activities affecting the quality of safety-related nuclear power plant structures, systems and components and describes the authority and duties assigned to them. It addresses responsibilities for both attaining quality objectives and for the assurance functions of establishing the quality assurance program and verifying that activities affecting the quality of safety-related items are performed in accordance with QA program requirements.

Quality assurance functions (as defined above) are performed by personnel within formally designated Quality Assurance (QA) organizational units. Specific areas of responsibility and authority are delegated to these units by the individual assigned overall responsibility and authority for the QA program. The reporting level of the QA - Nuclear Operations and the Environmental and Quality Assurance organizations affords sufficient authority and organizational freedom, including sufficient independence from the cost and schedule impacts of QA organization actions, to enable people in those organizations to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions. QA/QC functions at the nuclear plants are performed by onsite quality assurance organizations that report to QA - Nuclear Operations, General Office or, as appropriate, by onsite or offsite quality assurance personnel who report to Environmental and Quality Assurance.

1.2 IMPLEMENTATION

1.2.1 Source of Authority

The President and Chief Executive Officer of CP Co is responsible for safe operation of CP Co nuclear power plants. Authority and responsibility for establishing and implementing the QA program for plant operations, maintenance and those modifications accomplished by the Nuclear Operations Department, is delegated through the Executive Vice President - Energy Supply to the Vice President - Nuclear Operations. Similar authority and responsibility for establishing and implementing the QA program for those modifications accomplished by the Projects, Engineering and Construction organization is delegated to the Vice President - Projects, Engineering and Construction (PE&C). This delegation is formalized in a STATEMENT OF RESPONSIBILITY AND AUTHORITY signed by the President and Chief Executive Officer. See Figures 1-8 - Company Organization Charts.

1.2.2 Responsibility for Attaining Quality Objectives in the Nuclear Operations Organization

The Vice President - Nuclear Operations is responsible to the Executive Vice President - Energy Supply for operation and maintenance of CP Co nuclear power plants. Directors and managers who report to him are responsible for directing the performance of activities that affect safe plant operation and/or safety-related functions of structures, systems and components of the operating nuclear power plants in accordance with QA Program requirements.

a. The Plant General Managers/Plant Superintendents are responsible to the Vice President - Nuclear Operations for operation and maintenance of the nuclear power plants in such a manner as to achieve compliance with Plant licenses, applicable regulations and the QA Program. Each Plant General Manager or Plant Superintendent delegates to appropriate functional superintendents and staff personnel in his organization responsibility for carrying out applicable controls required by the quality assurance program. QA program activities performed on the authority of the Plant General Manager or Superintendent include:

Assuring that plant operating and maintenance personnel are properly qualified for their duties.

Control of preparation, review and approval of Q-List updates.

Control of preparation, review and approval of plant procedures and instructions.

Procurement planning for the plant including preparation of and obtaining the required reviews and approval of purchase requests for spares, replacement items and consumables; and materials, items and services for minor modifications; and submittal of purchase request packages to Purchasing for procurement actions.

Project responsibility for minor modifications including design, procurement, construction and testing activities, whether performed by CP Co or by outside contractors.

Authorizing use of secondary calibration standards whose accuracy is equal to that of equipment being calibrated, and assuring that such use cannot result in operation outside Technical Specifications limits.

Maintaining Echelon III calibration facilities for Portable and Laboratory Measuring and Test Equipment (PL-M&TE) and Health Physics PL-M&TE (HPPL-M&TE). Calibration/maintenance of installed plant instrumentation.

Operating onsite Document Control Centers.

Onsite evaluation of corrective action documents in accordance with Section 16.0, CORRECTIVE ACTION, including initial determination of reportability to the NRC.

Providing for storage and protection of purchased materials and items and items awaiting disposition implementation after removal from service, assuring preservation of identification.

Implementing security, fire protection, health physics and emergency plans.

Performing start-up and operational testing, such as precritical and criticality tests, low-power, power ascension and plant tests, and surveillance testing.

Maintaining equipment status control.

Maintaining required controls over chemical standards and reagents.

b. The Executive Director - Nuclear Activities delegates authority for QA program controls to the Directors of Radiological Services, Reactor Engineering, Nuclear Plant Support, Nuclear Plant Projects, the Nuclear Licensing Administrator, and the Executive Engineer - Nuclear Activities Plant Organization. Controlled activities include:

Furnishing qualified personnel for participation in inservice inspection.

Preparing and obtaining required review and approval of designs for minor modifications, as assigned. Determining, or participating in determination of methods to be used for verification of design adequacy, preparing test specifications and/or plans as required, and confirming the results of such verifications.

Preparing and obtaining required reviews and approval of purchase requests and providing approved procurement packages to Purchasing for action, as assigned.

Providing required support in determining/monitoring of water chemistry.

Providing necessary corrective action processing and status reporting for assigned corrective action documents, including offsite determination of NRC reportability

Accomplishing plant licensing activities including maintaining licensing documents up-to-date, interfacing with the NRC, accomplishing and/or tracking licensing commitments and coordinating internal action on NRC bulletins, circulars, notices etc.

Providing technical support to the onsite and offsite review organizations and providing technical support for problem resolution and general office interface as described in plant technical specifications.

Performing reactor engineering functions, such as fuel calculations and specification, fuel movement calculations, reactor thermal profile studies, etc.

Operating the dosimetry laboratory.

Maintaining the emergency and health physics plans.

c. The Director - Nuclear Training is responsible for establishment, implementation and documentation of training of NOD operations and technical support personnel, including indoctrination and training on the QA Program for NOD personnel.

d. The Nuclear Safety Board, chaired by the Executive Director - NAD, the Executive Engineer, NAPO, or a duly appointed alternate is responsible for performance of the offsite safety review functions for the nuclear power plants as described in plant technical specifications. The NSB and NAPO are collectively referred to as the Nuclear Safety Assessment and Policy (NSAP) organization.

e. The Director - Nuclear Planning and Administration is responsible for administrative control of Nuclear Operations Department Standards and biennial assessment of QA program effectiveness.

1.2.3 Responsibility for Attaining Quality Objectives in the Projects, Engineering and Construction Organization

The Vice President - Projects, Engineering and Construction is responsible for major modifications to CP Co nuclear power plants. Directors and Managers reporting to him are responsible for directing the performance of activities that affect assigned modifications in accordance with QA Program requirements. Figure 6 shows the Projects, Engineering and Construction organization.

a. The Executive Manager - Plant Modifications and Miscellaneous Projects (PM&MP) is responsible for performing in a quality manner the engineering, construction, preoperational testing and overall project management of generating plant modification projects. For operational nuclear power plants, this includes the responsibility for permitting design, construction, schedule control, testing and costs, for those modification projects assigned to the PE&C organization, as follows:

The Executive Manager - Plant Modifications and Miscellaneous Projects is responsible for the following departments reporting to him. Figure 8 depicts the organization.

(1) Construction and Testing department - The Construction and Testing Department is responsible for providing staff support and technical expertise on construction and testing matters to the PM&MP projects.

This Department also provides qualified field supervisory personnel in the construction and testing disciplines for assignment as departmental representatives to each project team.

(2) Engineering Department - This Department has the responsibility for providing the technical expertise and direction for all design and other engineering related functions for those operational nuclear power plant modification projects assigned in the PE&C organization. As such, it will function, as appropriate, as either the lead design organization when such projects are engineered in-house or as the Company's design reviewer when those projects are done by outside engineering organizations. It achieves this role by providing the project engineers and supporting staff to the project management matrix organizations.

(3) Staff Consultant - The Staff Consultant performs special studies relating to various activities and needs as requested by the Executive Manager. Staff consultant accomplishes his work either through his own efforts or by means of work groups or task forces as he determines necessary.

(4) Projects Department - Reporting to the Manager of Projects are individual Project Managers assigned to manage specific generating plant modifications projects and miscellaneous projects. Each Manager has overall responsibility for accomplishing, in a quality manner, the design, construction, testing, costs, scheduling and contract administration for each assigned project utilizing the resources of PM&MP and other Company departments as necessary.

b. The Executive Manager - Transmission and Department Services is responsible for the Electric Transmission - Engineering and Construction Department, the Gas P&T Engineering and Construction Department and Department Services. His organization is responsible for collecting, microfilming, storing, maintaining, distributing and controlling plant drawings and specifications through the Engineering Records Center.

c. Midland Project - Upon receipt of the Operating License for either unit of the Midland Plant, the Vice President-Nuclear Operations will become responsible for site activities. The Vice President-Projects, Engineering and Construction will continue to have direct responsibility for completing any remaining construction and any remaining preoperational testing in accordance with the Quality Assurance Program described in CPC-1A. Plant modifications assigned to Projects, Engineering and Construction will be accomplished in accordance with CPC-2A by the Midland Project office.

1.2.4 Responsibility for Attaining Quality Objectives Outside Nuclear Operations and Projects, Engineering and Construction

Certain functions that constitute part of the Nuclear Operations QA Program are performed by CP Co organizational units outside the Nuclear Operations Department or Projects, Engineering and Construction, as follows:

a. The Director - Property Protection is responsible through the Vice President - General Services to the Executive Vice President - Region Operations, Energy Distribution, Customer Services and General Services for developing and maintaining the Fire Protection and Plant Security Plans for the nuclear power plants and for contract administration for the security force.

b. The Manager - Administrative Services is responsible through the Vice President - General Services to the Executive Vice President - Region Operations, Energy Distribution, Customer Services and General Services for microfilming of specified QA records and furnishing copies of the microfilm records for the required retention, protection and retrievability.

c. The Director - Purchasing is responsible through the Vice President - General Services to the Executive Vice President - Region Operations, Energy Distribution, Customer Services, and General Services for initiating procurement action based on approved purchase requests received from organizations performing or supporting plant operation, maintenance or modification.

d. The Manager - System Protection and Laboratory Services is responsible, through the Executive Manager - Production and Transmission and the Vice President - System Operations, to the Executive Vice President - Energy Supply for the following quality-related functions:

Maintaining/testing electrical protective devices.

Determining settings for electrical protective systems and relay control systems.

Reviewing/recommending changes to electrical protective schemes and associated settings.

Performing design verification testing associated with the above items, except when such testing is procured from approved outside contractors.

Maintaining the Company's Echelon II calibration facility for calibrating reference and secondary standards and general usage portable and laboratory M&TE.

Controlling the calibration recall system for Portable and Laboratory M&TE.

Documenting justification for, and authorizing use of, reference calibration standards having an accuracy less than four times that of secondary standards being calibrated.

Preparing, and obtaining the required reviews and approvals of, purchase requests for services, equipment and consumables, and submitting such requests to Purchasing for procurement action.

Conducting performance tests on materials, equipment and systems, as requested.

Performing nondestructive examination, and controlling/maintaining NDE equipment.

Providing qualified NDE procedures and equipment and NDE personnel.

Providing chemical and metallurgical analytical services.

e. The Director - Operating Services is responsible through the Vice President - Fossil Operations to the Executive Vice President - Energy Supply for developing and qualifying special process procedures and qualifying personnel and equipment for welding and heat treating, operating the Skill Centers for training of personnel, and as requested, for technical support to Nuclear Operations in the areas of metallurgy, welding, chemistry, electrical, mechanical and civil-structural engineering.

f. The Manager - Maintenance and Administrative Services is responsible through the Vice President - Fossil Operations to the Executive Vice President - Energy Supply for electrical equipment expertise.

g. The Director - Nuclear Fuel Supply is responsible through the Vice President - Fuel Supply to the Executive Vice President - Energy Supply, for the procurement of nuclear fuel and associated services.

h. The Director - Management and Budget is responsible through the Executive Vice President - Energy Supply for maintaining the Records Management System, operating the General Office (offsite) Document Control Center and for maintaining the Uniform File Index.

i. The General Manager Cobb and Whiting Plants is responsible through the Vice President - Fossil Operations to the Executive Vice President - Energy Supply for Field Maintenance Services.

1.2.5 Responsibility for Operational Quality Assurance Functions

The Director, Quality Assurance - Nuclear Operations, is responsible to the Vice President - Nuclear Operations for the definition, direction and effectiveness measurements of the Nuclear Operations QA Program, including those modifications accomplished by the Nuclear Operations Department, and for verifying that activities affecting the quality of safety-related items

are performed in accordance with QA Program requirements. The Director's authority includes the following major functions for work under his jurisdiction

Establishing the Nuclear Operations QA Program.

Continuing evaluation of QA Program status and adequacy, reporting his conclusions to CP Co Management.

Assuring that verification activities are accomplished by personnel not directly responsible for the work being performed.

Stopping unsatisfactory work to control further processing, delivery or installation of nonconforming materials or items.

Recommending that a plant be shut down if such action appears necessary (the order is issued by the Vice President - Nuclear Operations or the Plant General Manager/Superintendent).

Reviewing and concurring with organizational administrative procedures and procedure changes for compliance with nuclear operations QA Program requirements.

Establishing QA-NO staffing levels based on workload analysis and experience of manpower versus task history.

The Director's job description includes the following prerequisites: Previous management experience; knowledge of quality assurance regulations, policies, practices and standards; and experience working in quality assurance or related activities in reactor design, construction, or operations, or in a similar high technology industry. The quality management office, consisting of the Director and his immediate staff, meet or exceed the qualifications established in Paragraph 4.4.5 of ANSI/ANS 3.1, 12/79 Draft as endorsed by Regulatory Guide 1.8.

The Director, QA - Nuclear Operations has no other duties or responsibilities unrelated to QA that would prevent his full attention to QA matters, is sufficiently free from schedule and cost pressures to give appropriate weight to quality considerations in his decisions and recommendations, and has direct access to high enough levels of Management to obtain resolution of quality problems. As Director, he delegates authority and holds his organization responsible for accomplishing QA functions for operational nuclear power plants, as follows:

a. The General Supervisor - Quality Operations is responsible to the Director, QA - Nuclear Operations for management direction to the QA Superintendents and their staffs at the nuclear power plants. Each QA Superintendent is required to possess the educational and experience qualifications specified in Regulatory Guide 1.8. Under the direction of the General Supervisor - Quality Operations, each of the QA

Superintendents is responsible for the following activities; for work under his jurisdiction:

Site surveillance program.

Review of and concurrence with plant administrative procedures for compliance with Nuclear Operations QA Program requirements.

Verification of onsite corrective action implementation and the effectiveness of corrective action for significant problems.

Review of and concurrence with quality requirements of procurement request packages for site-originated procurements.

Onsite QA engineering associated with modification design performed within NOD.

Vendor surveys/source inspection for local procurements and in support of onsite projects.

Onsite inspection program, including receiving inspection and inspection and acceptance activities associated with operations, maintenance, modifications, testing, fuel handling and inservice inspection.

Routine attendance and participation at meetings of the Plant Review Committee.

Participation in daily work schedule and status meetings to remain abreast of day-to-day work assignments throughout the plant and to assure adquate QA coverage relative to procedural and inspection controls, acceptance criteria, and staffing and qualification of QA-NO personnel to carry out their assigments.

Review of and concurrence with test procedures and instructions for QA aspects.

Review and approval of inspection procedures and onsite inspection planning.

Review of work authorizing documents.

Review and concurrence with administrative procedures that control methods for indicating inspection, test and operating status and attachment/removal of inspection status indicators.

Review and concurrence with Q-Lists and Q-List changes to assure compliance with QA program commitments and to assure that the extent QA controls are to be applied to specific structures, system, and components is appropriate.

b. The General Supervisor - Quality Engineering is responsible to the Director, QA - Nuclear Operations for the nuclear operations QA audit program, projects QA and problem analysis. For work under his jurisdiction these activities include:

QA audit program including follow-up on corrective action for audit findings.

Verification of the implementation and effectiveness of offsite corrective action for significant problems.

Supplier surveys and evaluation including review/approval of supplier QA programs.

Source surveillance/inspection at supplier facilities.

Offsite QA engineering associated with the design of modifications accomplished by the Nuclear Operations Department.

Review of and concurrence with quality requirements of procurement request packages generated offsite.

Participation in the Coordinating Agency for Supplier Evaluation (CASE).

Trend analysis and reporting.

Maintenance/operation of corrective action system.

Maintenance of the NOD Approved Suppliers List.

c. The General Supervisor - Quality Systems is responsible to the Director, QA - Nuclear Operations for QA program development and special studies including the following:

Maintenance of the QA Program Description for operational nuclear power plants..

Review of Nuclear Operations Department Standards (NODS) and review and concurrence with offsite administrative procedures for compliance with QA program requirements.

Development and maintenance of QA-NO Department procedures and quality control procedures.

Analysis of new and/or changed regulatory direction, codes and standards to determine their effect on the QA program.

1.2.6 Responsibility for Quality Assurance Functions for Modifications Assigned to Projects, Engineering and Construction

Environmental and Quality Assurance is responsible for establishing quality assurance standards for modifications accomplished by PE&C consistent with CP Co objectives and for assuring the establishment and implementation of policies and procedures to meet these standards.

In performing their quality assurance functions, Environmental and Quality Assurance personnel are independent from cost and schedule impact, have the authority and organizational freedom to identify assurance-related problems, initiate, recommend or provide corrective action and verify implementation of corrective action and are independent from the individuals or groups performing the activities being inspected, tested or audited.

Responsibility for carrying out quality assurance functions during modifications performed by PE&C is assigned to Environmental and Quality Assurance as follows:

a. The Quality Assurance Department - Plant Modifications (QAD-PM) is responsible for:

Preparing the Project Quality Assurance Plan and assuring the Plan's timely issuance with the mutual concurrence of the organizations involved.

Participating in the establishment of the Project Plan by establishing the Quality Assurance aspects of the Plan.

Participating, as specified by the Project and Project QA Plans.

Assuring the maintenance and reporting of hardware design quality and corrective action status.

Establishing supplier quality assurance requirements.

Performing preaward supplier evaluations for quality assurance factors.

Preparing and implementing plans and procedures for procured item inspections, nondestructive examinations and tests (within the Department's jurisdiction).

Evaluating and, when necessary, approving supplier Quality Assurance-related documentation.

Determining the acceptability or nonacceptability of hardware items.

Maintaining and reporting hardware procurement quality and corrective action status.

Preparing and implementing plans and procedures for the inspections, nondestructive examinations and tests (other than checkout and pre-

operational tests and functional tests for the establishment of inservice baseline) for stored and installed items and determining the acceptability or nonacceptability of the items.

Identifying installation inspection and examination problems and test problems (within the Department's test jurisdiction) and causing their timely and adequate correction.

Participating in the resolution of hardware and systematic nonconformances during installation and obtaining process corrective action.

Assuring that nonconforming items are properly identified segregated and dispositioned.

Maintaining and reporting site hardware quality and corrective action status.

Prior to the performance of preoperational, and functional inservice baseline tests, directly verifying the accomplishment of quality-related construction prerequisites and signing off on each such prerequisite to signify:

(1) That there has been a turnover acceptance of the test unit(s).

(2) That each nonconformance and deficiency, both preturnover and post-turnover, has been identified.

(3) That each such nonconformance and deficiency has been adequately dispositioned.

(4) Contributing to the identification of plant quality status by transmitting NCRs to the Project Test Supervisor for their incorporation into the overall plant status accounting system.

(5) Assuring the maintenance and reporting of test quality and corrective action status.

During the checkout, preoperational test, and functional inservice baseline test activities for modifications assigned to PE&C, reviewing the Project Testing Program Manual with respect to compliance with the Quality Assurance Program and annotating satisfactory completion of such review by a concurrence signature.

Reviewing the individual preoperational, and functional inservice baseline test procedures to assure preparation of procedures in compliance with applicable regulatory requirements, codes and standards, to assure the establishment of quality-related prerequisites for the performance of each test and to assure the adequacy of the data collection format and content for quality assurance records.

Evaluating compliance with test procedures on an audit and surveillance basis, signifying the test procedural steps actually audited and surveillanced by the application of QAD-PM signatures adjacent to those steps.

Issuing "Stop Work Orders" at any time that Quality Assurance Program commitments are violated, if necessary to preclude a safety risk.

Performing quality audits, as requested.

b. The Audit & Management System Section is responsible for performing audits of activities which may impact the design and construction quality of modifications assigned to PE&C, as follows:

Evaluating the adequacy of quality policies and procedures.

Evaluating the degree of compliance with quality policies and procedures.

Obtaining corrective action, as necessary, based on audit findings.

Providing Quality Assurance education, training and indoctrination.

Preparing, releasing and controlling PE&C inter- and intradepartmental quality-related policies and procedures.

Issuing "Stop Work Orders" at any time that the Plant Modifications Quality Assurance Program commitments are violated, if necessary to preclude a safety risk.

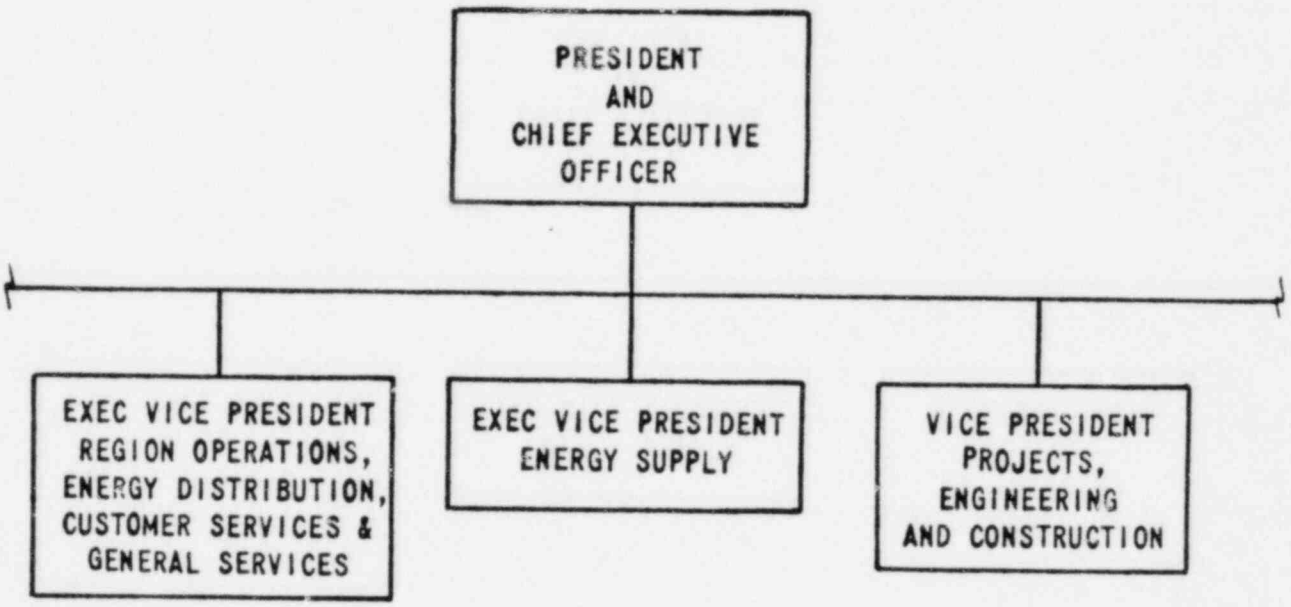

Figure 1 - Consumers Power Company Corporate Organization

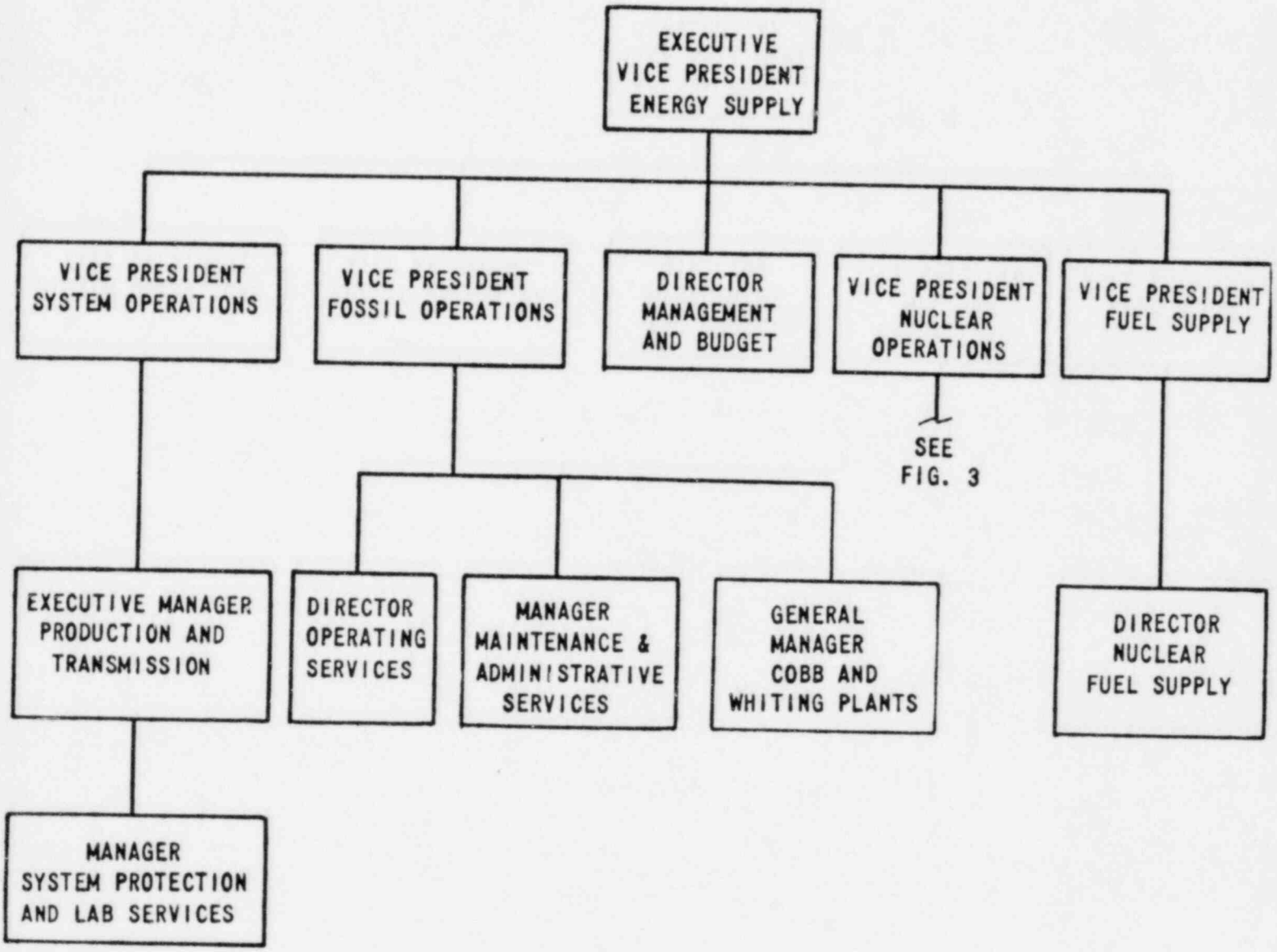

Figure 2 - Energy Supply Organization

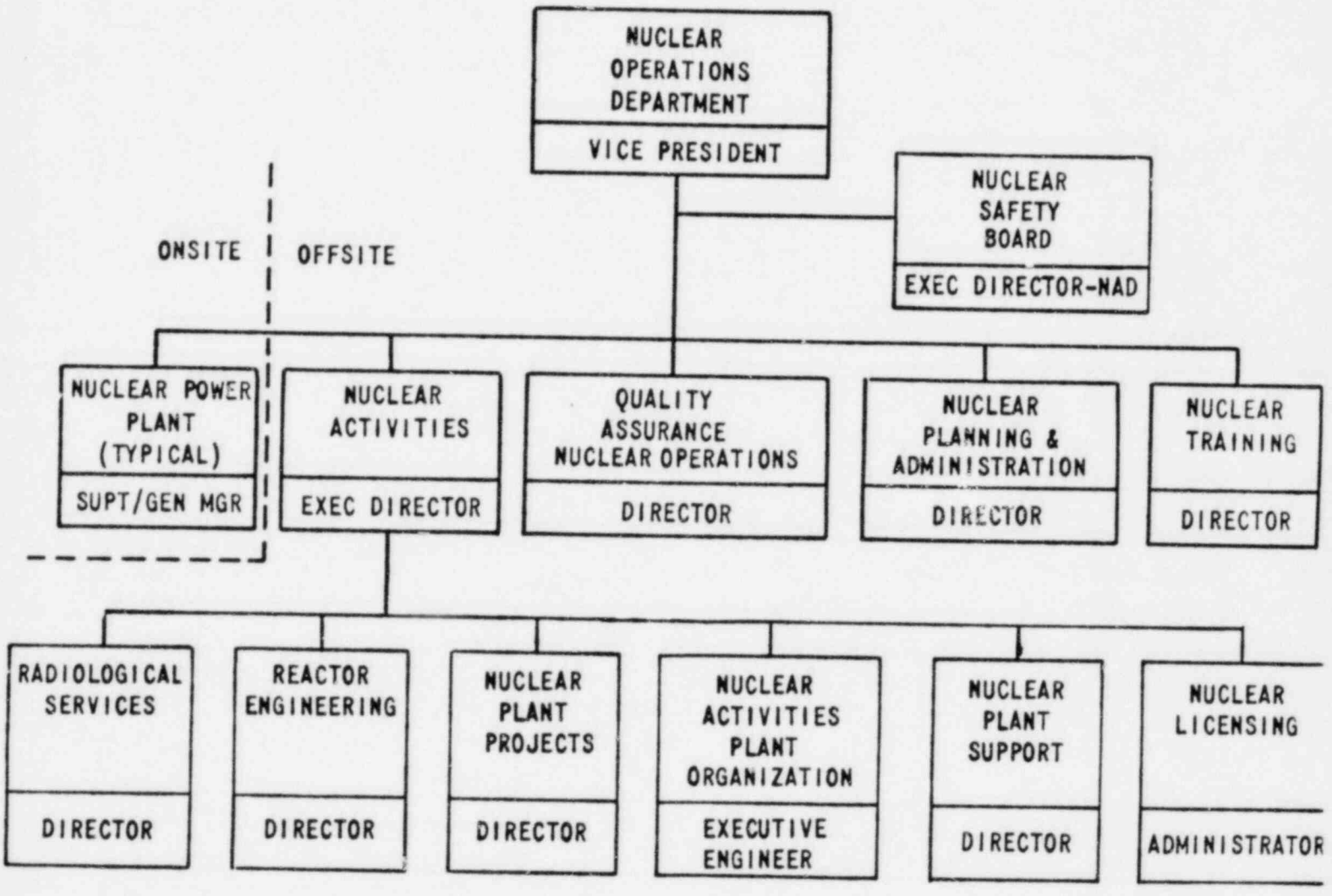

Figure 3 - Nuclear Operations Department Organization

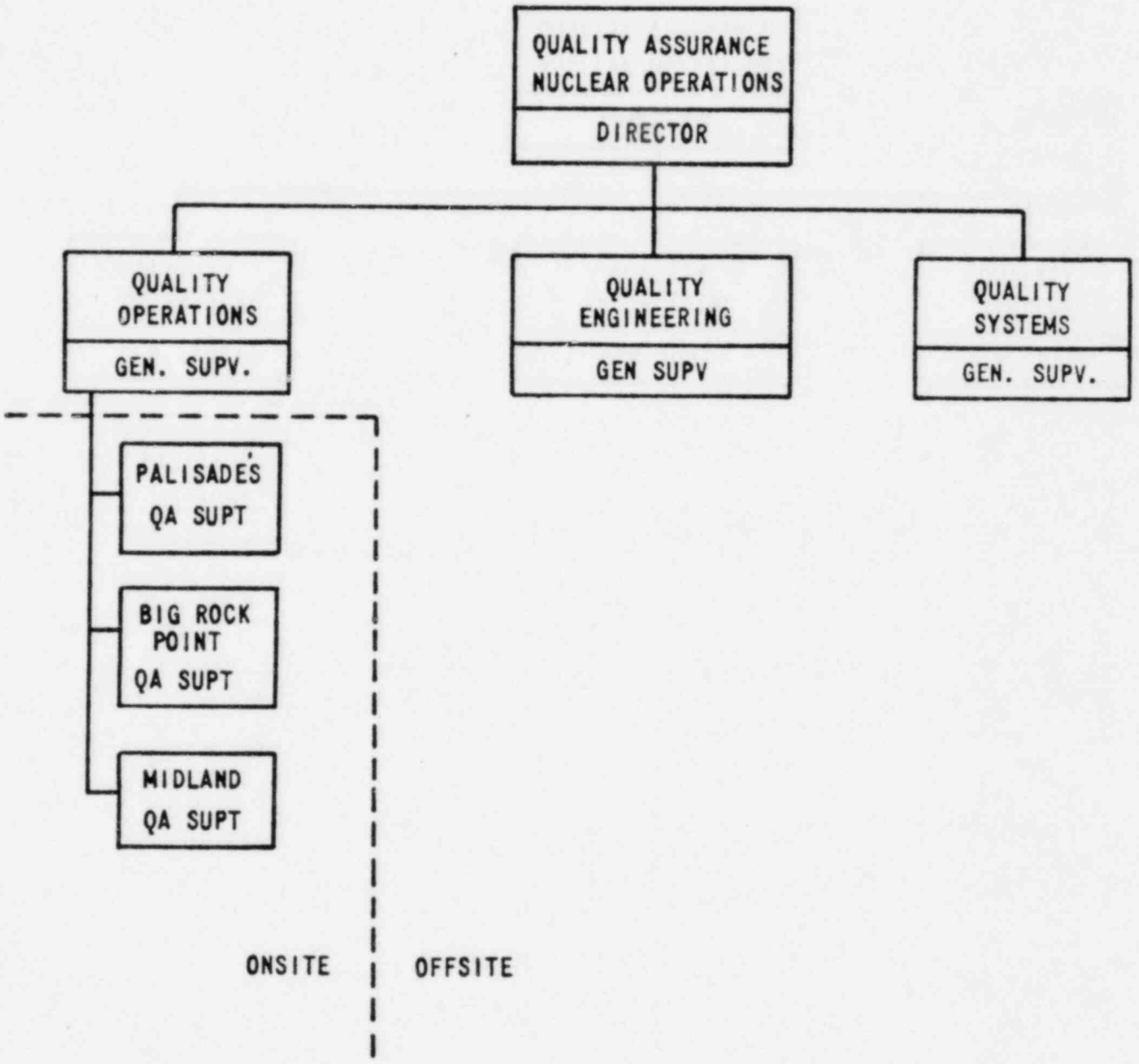

Figure 4 - Quality Assurance - Nuclear Operations Organization

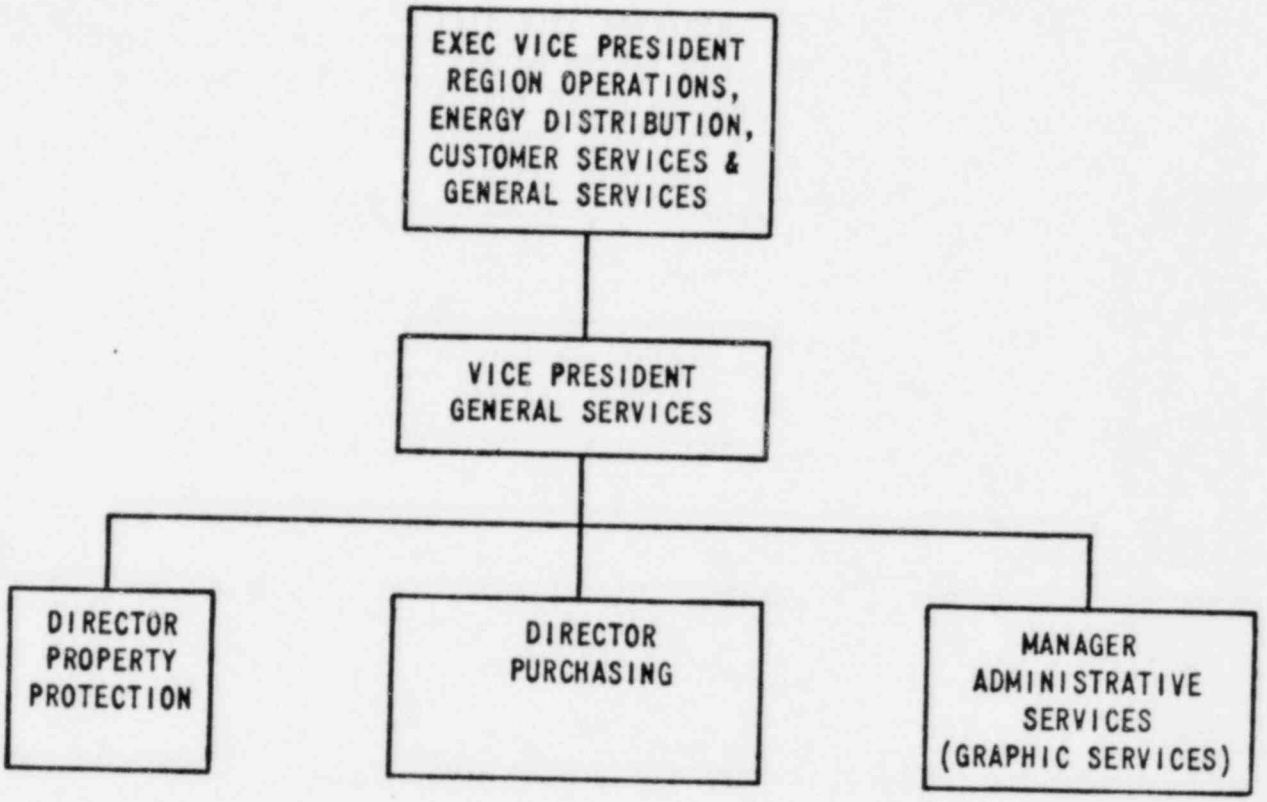

Figure 5 - Energy Distribution and General Services Organization

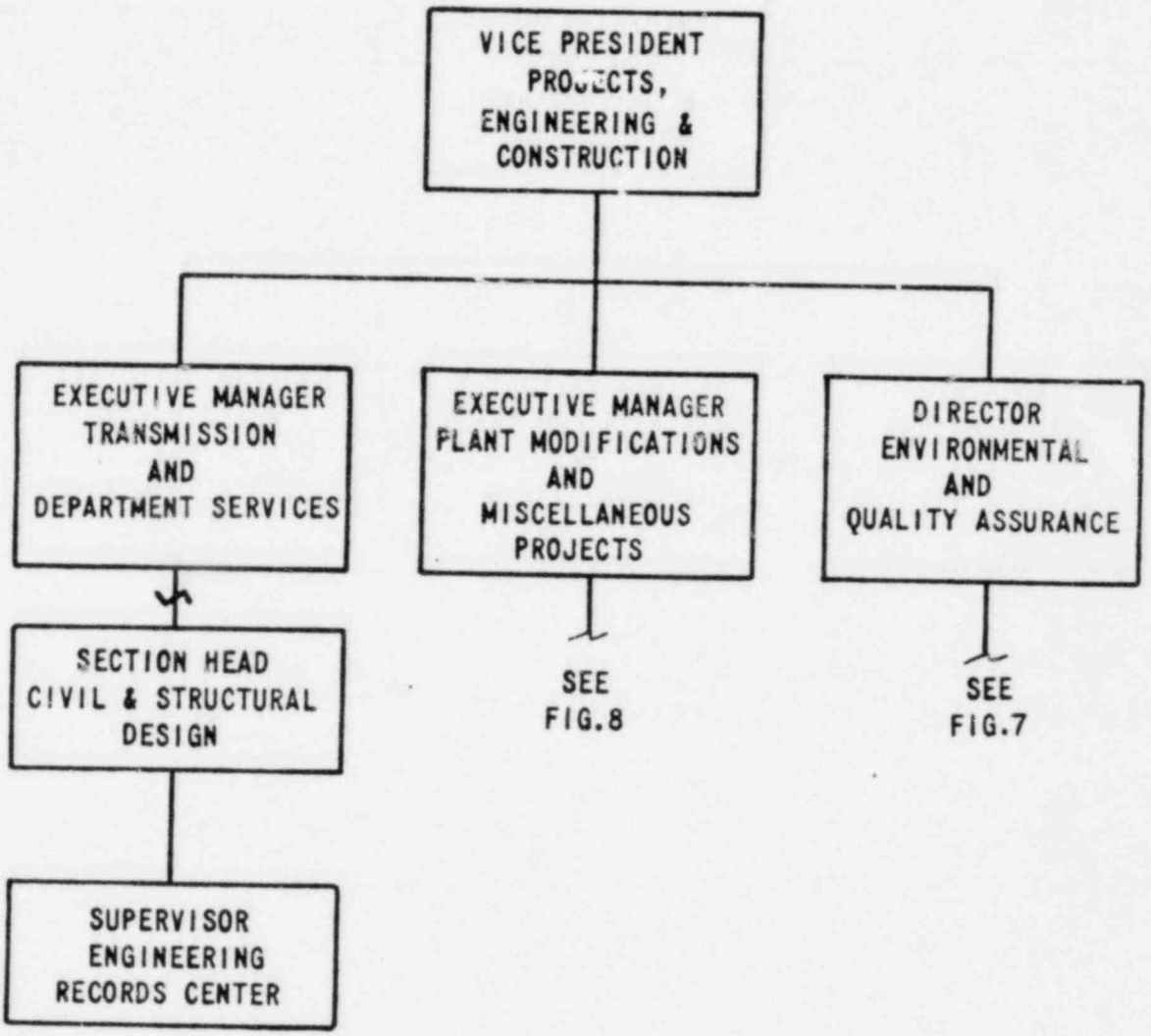

Figure 6 - Projects, Engineering and Construction Organization

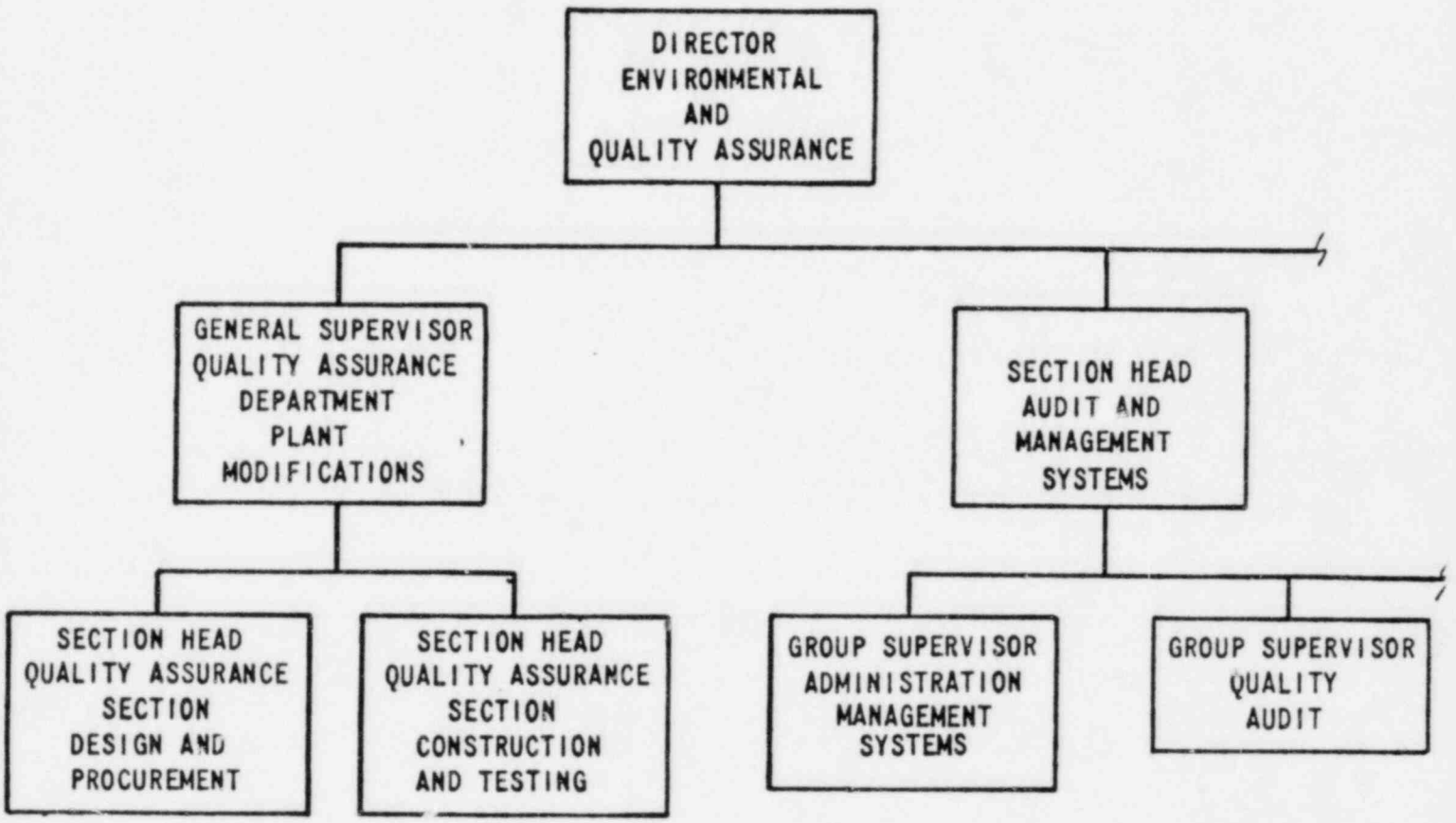

Figure 7 - Environmental and Quality Assurance Organization for Major Modifications

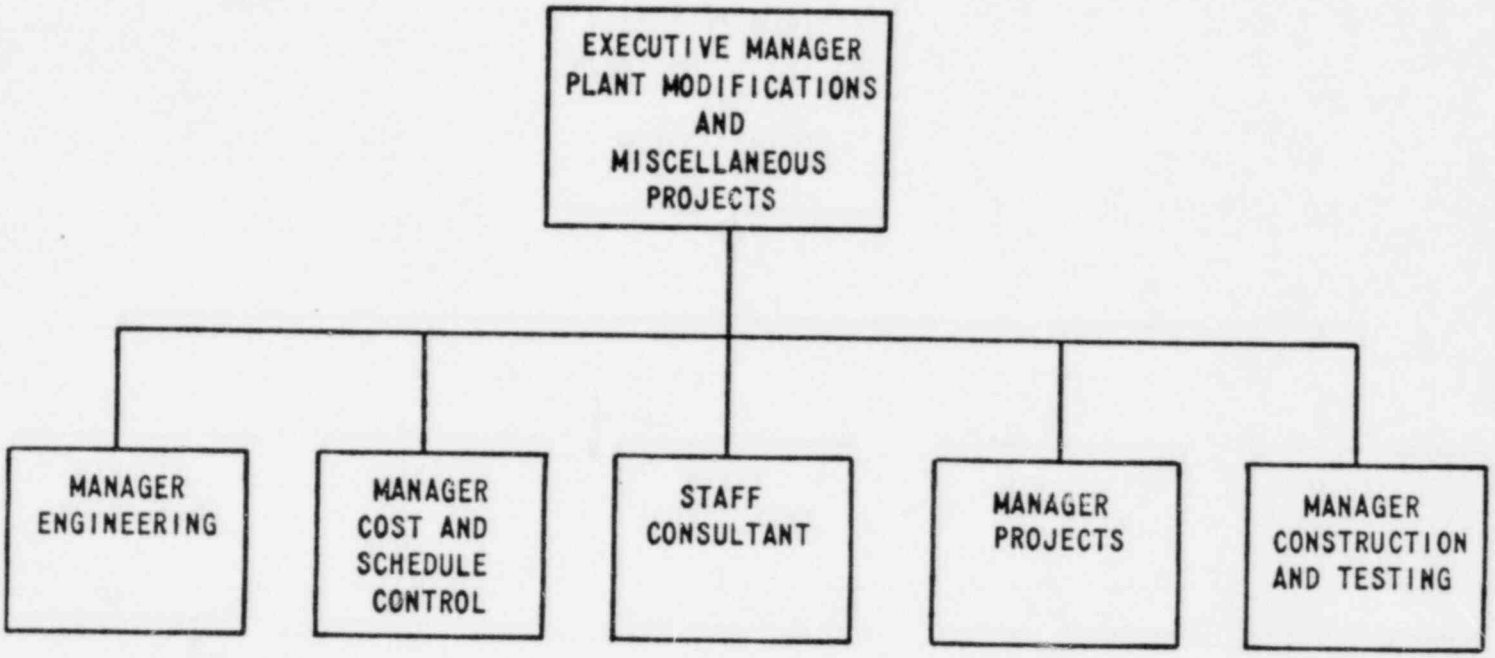

Figure 8 - Plant Modifications and Miscellaneous Projects Organization

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2.0 QUALITY ASSURANCE PROGRAM

2.1 POLICY

Policies that define and establish the Consumers Power Company (CP Co) Quality Assurance Program for operational nuclear power plants are stated in the individual sections of this document. The program is implemented through procedures and instructions responsive to provisions of the QAPD and will be carried out for the life of each plant.

Quality assurance controls apply to activities affecting the quality of safety-related structures, systems and components, to an extent based on the importance of those structures, systems, or components to safety. Such activities are performed under suitably controlled conditions, including the use of appropriate equipment, maintenance of proper environmental conditions, assignment of qualified personnel, and assurance that all applicable prerequisites have been met.

Quality Assurance Program status, scope, adequacy, and compliance with 10CFR50 Appendix B are regularly reviewed by CP Co Management through reports, meetings and review of audit results. Biennially, a preplanned and documented assessment of the Nuclear Operations QA Program is performed by a management team independent of QA-Nuclear Operations. A similar biennial independent assessment of the Plant Modification portion of the QA Program is also performed.

2.2 IMPLEMENTATION

2.2.1 The President of Consumers Power Company, as Chief Executive Officer, has stated in a formal STATEMENT OF RESPONSIBILITY AND AUTHORITY, signed by him, that it is corporate policy to comply with the provisions of applicable legislation and regulations pertaining to quality assurance for nuclear power plants as defined by 10CFR50 Appendix B. The statement makes this QAPD and the associated implementing procedures and instructions mandatory, and requires compliance by all responsible organizations and individuals. It identifies the Management positions in the Company vested with responsibility and authority for implementing the Program and assuring its effectiveness.

2.2.2 The Quality Assurance Program at CP Co consists of controls exercised by organizations responsible for attaining quality objectives and by organizations responsible for assurance functions (see Section 1.0, ORGANIZATION).

2.2.3 The effectivity and applicability of this QAPD are as follows:

a. For Big Rock Point and Palisades, the QAPD becomes effective on April 1, 1982, with full implementation by January 1, 1983.

b. For Midland, a construction phase quality assurance program, described in Chapter 17.1 of the FSAR applies until the operations phase program, described in this QAPD, takes effect upon receipt of

the plant operating license. To ensure smooth transition from construction to operations, plant procedures that implement the requirements of this QAPD will be in place by January 1, 1983.

c. The QA Program described in this QAPD is intended to apply for the life of CP Co's nuclear power plants.

d. The QA Program applies to activities affecting the quality of safety-related structures, systems, components and related consumables during plant operation, maintenance, testing and all modifications. Safety-related structures, system, components and related consumables are identified in Q-Lists, which are developed and maintained for each plant in accordance with the criteria of Regulatory Guide 1.29 as clarified by item no. 20a in Part 2 of Appendix A to this QAPD. In addition, Midland Plant items falling into Groups A, B and C of Regulatory Guide 1.26 are considered to be safety-related (see Appendix A, Part 2, Item no. 18a).

2.2.4 This QAPD, organized to present the CP Co Quality Assurance Program for operational nuclear power plants in the order of the 18 criteria of 10CFR50 Appendix B, states CP Co policy for each of the criteria and describes how the controls pertinent to each are carried out. The NRC will be notified by letter of any changes affecting the controls previously established by this QAPD. This notification will be made within thirty days of the change. The NRC will also be notified of any substantial organizational change affecting the Quality Assurance Program within thirty days after the change. Such notices will include a written evaluation identifying the change, the reason for it, and the basis for concluding that it satisfies the criteria of 10CFR50 Appendix B.

The program described in this QAPD will not be changed in any way that would prevent it from meeting the criteria of 10CFR50 Appendix B.

2.2.5 Documents used for implementing the provisions of the QAPD include the following:

a. Nuclear Operations Department Standards (NODS) specify the standard methods of accomplishing operational phase activities. Because the Quality Assurance Program is an integral part of the operational phase activities, the methods for implementing Quality Assurance Program controls are integrated into the NODS. QA - Nuclear Operations reviews the NODS for compliance with QA Program requirements and Corporate QA policy.

b. Administrative procedures for accomplishing quality-related activities specified in the NODS are also reviewed for compliance with QA Program requirements and Corporate QA policy by QA - Nuclear Operations.

c. Quality Assurance Program Procedures, Quality Assurance Program Procedure Supplements and quality assurance-related departmental

procedures for modification activities assigned to PE&C are approved by QAD-PM after review by A and MS for compliance with QA Program requirements and Corporate QA policy.

d. When Contractors perform work under their own quality assurance programs, these programs are reviewed for compliance with the applicable requirements of 10CFR50 Appendix B and the contract and are approved by the applicable CP Co QA organization prior to the start of work.

e. Applicable elements of the operations Quality Assurance Program are applied to emergency plans, security plans, radiation and fire protection plans for CP Co nuclear power plants. These plans describe QA controls applicable to associated equipment.

2.2.6 Provisions of the Quality Assurance Program for operational nuclear power plants apply to activities affecting the quality of safety-related structures, systems, components, and related consumables. Appendix A to this QAPD lists the ANSI Standards and Regulatory Guides that identify CP Co's commitment. Appendix A also describes necessary exceptions and clarifications to the requirements of those documents. The scope of the program and the extent to which its controls are applied are established as follows:

a. CP Co uses the criteria specified in Regulatory Guides 1.26 and 1.29 for identifying structures, systems, and components to which the Quality Assurance Program applies (See Appendix A).

b. This identification process results in a Q-list for each nuclear power plant. The Q-list is a controlled document, issued to designated personnel. Q-list items are determined by engineering analysis of the function(s) of plant structures, systems, components, and consumables in relation to safe operation and shutdown.

c. The extent to which controls specified in the Quality Assurance Program are applied to Q-listed items is determined for each item considering its relative importance to safety. Such determinations are based on data in such documents as the plant risk analysis, plant Technical Specifications and the FSAR/FHSR (See Appendix A).

2.2.7 Activities affecting safety are accomplished under controlled conditions. Preparations for such activities include confirmation that prerequisites have been met, such as:

a. Assigned personnel are qualified.

b. Work has been planned to the proper revisions of applicable engineering and/or technical specifications.

c. Specified equipment and/or tools, if any, are on hand to be used.

d. Materials and items are in an acceptable status.

e. Systems or structures on which work is to be performed are in the proper condition for the task.

f. Authorized current instructions/procedures for the work are available for use.

g. Items and facilities that could be damaged by the work have been protected, as required.

h. Provisions have been made for special controls, processes, tests, and verification methods.

2.2.8 Development, control, and use of computer programs affecting nuclear power plant design and operation at CP Co are subject to QA program design controls (see Section 3.0, DESIGN CONTROL).

2.2.9 Responsibility and authority for planning and implementing indoctrination and training are specifically designated in the CP Co organization (see Section 1.0, ORGANIZATION).

a. The training and indoctrination program provides for ongoing training and periodic refamiliarization with the Quality Assurance Program for operational nuclear power plants.

b. Personnel who perform inspection and examination functions are qualified in accordance with requirements of Regulatory Guide 1.58, SNT TC-1A, or the ASME Code, as applicable.

c. Personnel who participate in quality assurance audits are qualified in accordance with Regulatory Guide 1.146.

d. Personnel assigned duties such as special cleaning processes, welding, etc, are qualified in accordance with applicable codes, standards, and regulatory guides.

e. The training/qualification program for personnel performing QA functions includes provisions for retraining, reexamination and recertification to ensure that proficiency is maintained.

f. Certificates of qualification for personnel performing QA functions designate specific functions that the named personnel are qualified to perform and indicate the performance criteria on which the qualification was based.

g. Training and qualification records including documentation of objectives, content of program, attendees and dates of attendance are maintained at least as long as the personnel involved are performing activities to which the training/qualification is relevant.

h. Personnel responsible for performing activities that affect quality are instructed as to the purpose, scope and implementation of the applicable quality related manuals, instructions and procedures.

2.2.10 Status and adequacy of the quality assurance program are regularly assessed by CP Co Management. The following activities constitute formal elements of that assessment:

a. Audit reports, including follow-up on corrective action accomplishment and effectiveness, are distributed to appropriate levels of Management (see Section 18.0, AUDIT).

b. Operations QA Program Status Meetings are held semi-annually, involving the Vice President, Nuclear Operations, the Director, QA - Nuclear Operations, and the Managers of the other organizations responsible for implementing elements of the operations portion of the QA Program for operational nuclear power plants.

c. Semi-annual QA Program status meetings are held involving the Vice President - Projects, Engineering and Construction, the Director - Environmental & Quality Assurance, the General Supervisor QAD - Plant Modifications and the Managers of other organizations responsible for implementing this QA Program for modifications accomplished by PE&C.

d. Management teams independent from the Quality Assurance organizations, but knowledgeable in auditing and quality assurance, biennially review the effectiveness of the Quality Assurance Program for operational nuclear power plants for both the operations portion of the Program and the portion covering modifications accomplished by PE&C. Conclusions and recommendations are reported to the Executive Vice President - Energy Supply and the Vice President - Projects, Engineering and Construction, respectively. Corrective actions in response to recommendations are tracked in the regular corrective action tracking system (see Section 16.0, CORRECTIVE ACTION).

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3.0 DESIGN CONTROL

3.1 POLICY

Modifications to structures, systems and components are accomplished in accordance with approved designs. Activities to develop such designs are controlled. Depending on the type of modification, these activities include design and field engineering; the performance of physics, seismic, stress, thermal, hydraulic, radiation and Safety Analysis Report (SAR) accident analyses; the development and control of associated computer programs; studies of material compatibility; accessibility for inservice inspection and maintenance; and determination of quality standards. The controls apply to preparation and review of design documents, including the correct translation of applicable regulatory requirements and design bases into design, procurement and procedural documents.

3.2 IMPLEMENTATION

3.2.1 Authority and responsibility for modification activities under the cognizance of the Nuclear Operations Department and Projects, Engineering and Construction are described in Section 1.0 ORGANIZATION. This authority and responsibility includes the preparation, review, approval and verification of the following design documents: a) System descriptions; b) Design input and criteria; c) Drawings and specifications; and d) Engineering analyses and associated computer programs.

3.2.2 Errors and deficiencies in approved design documents, or in design methods (such as computer codes) that could adversely affect structures, systems and components are documented. Action is taken to assure that the errors and deficiencies are corrected.

3.2.3 Materials, parts and processes that are essential to safety-related functions are selected and specified, based on the requirements of applicable codes and standards or on known, successful use under similar conditions. This includes standard commercial materials, parts and processes. Alternatively, materials, parts and processes may be qualified for use through qualification testing (see Item 3.2.8). The adequacy of the selected materials, parts and processes is assured through the required design verifications or approvals.

3.2.4 Exceptions and waivers to or deviations from the engineering (quality) standards (ie, the required dimensions, material properties, features and other characteristics specified for modifications) are required by procedure and by contract, when applicable, to be documented and controlled. (See, also, Section 15 concerning the approval of "repair" or "use as is" dispositions of nonconformances.)

3.2.5 When modifications involve design interfaces between internal or external design organizations or across technical disciplines, these interfaces are controlled. Procedures are used for the review, approval, release, distribution and revision of documents involving design interfaces to ensure that structures, systems and components are compatible geometrically,

functionally and with processes and environment. Lines of communication are established for controlling the flow of needed design information across design interfaces, including changes to the information as work progresses. Decisions and problem resolutions involving design interfaces are made by the CP Co organization having responsibility for engineering direction of the design effort.

3.2.6 Checks are performed and documented to verify the dimensional accuracy and completeness of design drawings and specifications.

3.2.7 Modification design document packages are reviewed by QA - Nuclear Operations or QAD - Plant Modifications, as applicable, to assure that the documents that they contain have been prepared, verified, reviewed and approved in accordance with Company procedures and that they contain the necessary quality assurance requirements. These requirements include the inspection and test requirements, quantitative and/or qualitative acceptance criteria and the requirements for documenting inspection and test results.

3.2.8 The extent of and methods for design verification are documented. The extent of design verification performed is a function of the importance of the item to safety, design complexity, degree of standardization, the state-of-the-art and similarity with previously proven designs. Methods for design verification include evaluation of the applicability of standardized or previously proven designs, alternate calculations, qualification testing, and design reviews. These methods may be used singly or in combination, depending on the needs for the design under consideration.

When design verification is done by evaluating standardized or previously proven designs, the applicability of such designs is confirmed. Any differences from the proven design are documented and evaluated for the intended application.

Qualification testing of prototypes, components or features is used when the ability of an item to perform an essential safety function cannot otherwise be adequately substantiated. This testing is performed before plant equipment installation where possible, but always before reliance upon the item to perform a safety-related function. Qualification testing is performed under conditions that simulate the most adverse design conditions, considering all relevant operating modes. Test requirements, procedures and results are documented. Results are evaluated to assure that test requirements have been satisfied. Modifications shown to be necessary through testing are made, and any necessary retesting or other verification is performed. Scaling laws are established and verified, when applicable. Test configurations are clearly documented.

Design reviews are performed by multi-organizational or interdisciplinary groups or by single individuals. Criteria are established to determine when a formal group review is required, and when review by an individual is sufficient.

Unless otherwise stated, the verification of design addresses all information conveyed by the design document. When the verification is

limited to certain areas or features, the scope or extent and any limitations on the verification are documented.

3.2.9 Persons representing applicable technical disciplines are assigned to perform design verifications. These persons are qualified by appropriate education or experience but are not directly responsible for the design. The designer's immediate supervisor may perform the verification, provided that:

(1) He is the only technically qualified individual, and

(2) He has not specified a singular design approach, ruled out design considerations, or established the design inputs.

(3) The need is individually documented and approved in advance by the supervisor's management.

QA audits cover the frequency and effectiveness of the use of supervisors as design verifiers to guard against abuse.

3.2.10 When designs must be released for use before they have been fully completed or before they have been verified, the incomplete or unverified parts of the design and the point to which work may proceed are identified. This hold point occurs before the work becomes irreversible or before the item is relied on to perform a safety-related function. Justification for such early release is documented.

3.2.11 Computer codes used in design are appropriately documented, verified, certified for use and controlled. Their use is specified.

3.2.12 Changes to design output documents, including field changes, are controlled in a manner commensurate with that used for the original design. Such changes are evaluated for impact. Those that affect fit, form or function are reviewed and approved by the same, or equivalent, organizations that approved the original design. Information on approved changes is transmitted to all affected organizations.

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4.0 PROCUREMENT DOCUMENT CONTROL

4.1 POLICY

Procurement documents define the characteristics of item(s) to be procured, identify applicable regulatory and industry codes/standards requirements, and specify supplier quality assurance program requirements to the extent necessary to assure adequate quality.

4.2 IMPLEMENTATION

4.2.1 Responsibilities and authorities for procurement planning and for preparation, review and approval of procurement documents are delineated in Section 1.0, ORGANIZATION.

Procurement request packages are reviewed and approved prior to submittal to the Purchasing Department. Review includes verification by QA - Nuclear Operations or Quality Assurance Department - Plant Modifications that the necessary quality requirements are specified.

The responsible project engineer performs bid evaluations.

4.2.2 Supplier selection is described in Section 7.0, CONTROL OF PURCHASED MATERIALS, EQUIPMENT AND SERVICES.

4.2.3 The contents of procurement documents vary according to the item(s) being purchased and its function(s) in the plant. Provisions of this QAPD are considered for application to suppliers. As applicable, procurement documents include:

a. Scope of work to be performed

b. Technical requirements, with applicable drawings, specifications, codes and standards identified by title, document number, and revision and date, with any required procedures such as special process instructions identified in such a way as to indicate source and need

c. Regulatory, administrative and reporting requirements

d. Quality requirements appropriate to the complexity and scope of the work, including necessary tests and inspections

e. A requirement for a documented QA Program, subject to QA - Nuclear Operations or QAD - Plant Modifications review and written concurrence prior to the start of work

f. A requirement for the supplier to invoke applicable quality requirements on subtier suppliers

g. Provisions for access to supplier and subtier suppliers' facilities and records for inspections, surveillances and audits.

h. Identification of documentation to be provided by the supplier, the schedule of submittals, and identification of documents requiring CP Co approval

4.2.4 QA - Nuclear Operations or QAD - Plant Modifications, as applicable, performs and documents reviews of procurement request packages to assure that:

a. Quality requirements (see 4.2.3 of this Section) are correctly stated, inspectable, and controllable.

b. Adequate acceptance and rejection criteria are included.

c. The procurement documents have been prepared, reviewed, and approved per the QA Program requirements.

4.2.5 Changes to the technical or quality requirements in procurement documents are controlled in a manner commensurate with that used for the original requirements. Those that could affect fit, form, function, or the necessary assurance of quality are reviewed and approved by the same, or equivalent, organizations that approved the original procurement request packages.

5.0 INSTRUCTIONS, PROCEDURES AND DRAWINGS

5.1 POLICY

Activities affecting the quality of safety-related structures, systems and components are accomplished using instructions, procedures and drawings appropriate to the circumstances which include acceptance criteria for determining if an activity has been satisfactorily completed.

5.2 IMPLEMENTATION

The authority and responsibility for performing activities affecting the quality of safety-related structures, systems and components are assigned as described in Section 1.0, ORGANIZATION. Management personnel assigned these responsibilities assure that the instructions, procedures and drawings necessary to accomplish the activity are prepared and implemented.

Instructions, procedures and drawings incorporate, (1) a description of the activity to be accomplished and (2) appropriate quantitative (such as tolerances and operating limits) and qualitative (such as workmanship standards) acceptance criteria sufficient to determine that the activity has been satisfactorily accomplished.

Temporary procedures may be issued to provide management instructions which have short-term applicability. Temporary procedures include a designation of the time period during which they may be used.

The procedures used by CP Co to control its activities include the following:

1. Administrative Control Procedures and Quality Assurance Procedures.

2. System procedures that describe the operation of the plant.

3. Start-up procedures that provide for starting the reactor from hot or cold condition and recovering from reactor trips.

4. Shutdown procedures that provide for controlled reactor shutdown or shutdown following reactor trips.

5. Power operation and load changing procedures that provide for steady state power operation and load changing, including response to unanticipated load changes.

6. Process monitoring procedures that provide for monitoring plant system performance and which, as appropriate, identify limits for significant process parameters.

7. Fuel-handling procedures that provide for activities such as:

   a. Core alterations

   b. Refueling

c. Fuel accountability

d. Receipt and shipment of fuel

e. Nuclear Safety measures

8. Maintenance procedures that provide for:

a. Preparation for maintenance

b. Performance of maintenance

c. Post-maintenance and operability checks

d. Use of supporting maintenance documents

9. Radiation control procedures that provide for:

a. Implementation of the radiation control program including the acquisition of radiation data

b. Identification of equipment for performing radiation surveys

c. Measurement, evaluation and assessment of radiation hazards

10. Calibration and test procedures that provide for:

a. Periodic calibration and testing of safety-related instrumentation and control systems

b. Calibration of portable measuring and test equipment used in activities affecting safety

11. Chemical-radiochemical control procedures that provide for activities including:

a. Sampling and analyses

b. Maintenance of coolant quality

c. Control of deleterious agents

d. Control, treatment and management of radioactive wastes

e. The control of radioactive calibration sources

12. Emergency procedures that provide guidance for:

a. Operations during potential emergencies so that a trained operator will know in advance the expected course of events that will identify an emergency and the immediate action he should take

b. Identifying symptoms of emergency conditions

c. Monitoring automatic action

d. Immediate operator action

e. Subsequent operator action

13. Emergency Plan Implementing Procedures.

14. Inspection, test and examination procedures that identify:

a. Objectives

b. Acceptance criteria

c. Prerequisite and special conditions

d. Limiting conditions

e. Test or inspection instructions

f. Any required special equipment or calibration

g. Hold and Witness points, as appropriate

15. Modification procedures that provide for:

a. Administrative control and technical support during plant modifications

b. The basis for a consistent method of performing recurring engineering, construction and quality assurance activities

c. Control of the interfaces between CP Co and its suppliers

d. Offsite management control and visibility

e. Control of onsite quality-related modification activities that assure the QA Program is implemented and its effectiveness is assessed and reported

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6.0 DOCUMENT CONTROL

6.1 POLICY

Documents controlling activities within the scope defined in Section 2.0, QUALITY ASSURANCE PROGRAM are issued and changed according to established procedures. Documents such as instructions, procedures, and drawings, including changes thereto, are reviewed for adequacy, approved for release by authorized personnel and are distributed and used at the location where a prescribed activity is performed.

Changes to controlled documents are reviewed and approved by the same organizations that performed the original review and approval or by other qualified, responsible organizations specifically designated in accordance with the procedures governing these documents.

6.2 IMPLEMENTATION

6.2.1 The authority and responsibility for the control of documents are described in Section 1.0, ORGANIZATION.

6.2.2 Controls are established for approval, issue and change of documents in the following categories:

a. Design documents (eg, calculations, drawings, specifications, analyses) including documents related to computer codes

b. As-built drawings and related documents

c. Procurement documents

d. Instructions and procedures for activities such as fabrication, construction, modification, installation, inspection, test and plant maintenance and operation

e. Procedures that implement the Quality Assurance Program

f. Final Safety Analysis Report

g. Reports of nonconformances

h. Plant Technical Specifications

6.2.3 The review, approval, issue and change of documents are controlled by:

a. Establishment of criteria to ensure that adequate technical and quality requirements are incorporated

b. Identification of the organizations responsible for review, approval, issue and revision

c. Performance and documentation of a review for concurrence with Quality Assurance related aspects by QA - Nuclear Operations or Environmental & Quality Assurance.

d. Review of changes to documents by the organization that performed the initial review and approval or by the organization designated in accordance with the procedure governing the review and approval of specific types of documents

6.2.4 Controlled documents are issued and distributed so that:

a. The documents are available at the work location prior to commencing work

b. Obsolete or superseded documents are removed from work areas and replaced by applicable revisions in a timely manner

6.2.5 Master lists or equivalent controls are used to identify the current revision of instructions, procedures, specifications, drawings and procurement documents. When master lists are used they are updated and distributed to designated personnel who are responsible for maintaining current copies of the lists.

6.2.6 Accurate as-built drawings and related documentation are prepared in a timely manner.

7.0 CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

7.1 POLICY

Activities that implement approved procurement requests for material, equipment and services are controlled to assure conformance with procurement document requirements. Controls include a system of supplier evaluation and selection, source inspection, examination and acceptance of items and documents upon delivery, and periodic assessment of supplier performance. Objective evidence of quality that demonstrates conformance with specified procurement document requirements is available to the nuclear power plant site prior to use of equipment, material or services.

7.2 IMPLEMENTATION

7.2.1 Authority and responsibility for implementing the controls outlined herein are described in Section 1.0, ORGANIZATION.

7.2.2 CP Co qualifies suppliers by performing a documented evaluation of their capability to provide items or services specified by procurement documents. To remain qualified, suppliers involved in active procurements are reevaluated annually and are audited triennially. If a Licensee Contractor/Vendor Inspection Program letter of confirmation or the Coordinating Agency for Supplier Evaluation Register is used to establish the qualifications of the Supplier, the documentation identifies the letter or the audit used. Evaluation of suppliers holding applicable ASME Certificates of Authorization is done by reference to the current ASME listing of certificate holders

Supplier evaluation and triennial audits are not necessary when the items or services supplied are all of the following:

a. Relatively simple and standard in design, manufacture and test, and

b. Adaptable to standard or automated inspections or tests of the end product to verify quality characteristics after delivery, and

c. Such that receiving inspection does not require operations that could adversely affect the integrity, function or cleanness of the item.

In the above cases, source and/or receipt inspection provides the necessary assurance of an acceptable item or service.

7.2.3 Supplier activities that affect quality are verified in accordance with written procedures. These procedures provide the method of verifying (such as audit, surveillance or inspection) and documenting that the characteristics or processes meet the requirements of the procurement document. For commercial "off-the-shelf" items where the requirements for a specific quality assurance program appropriate for nuclear applications cannot be imposed in a practical manner, source verification is used to provide adequate assurance of acceptability unless the quality of the item can be adequately verified upon receipt.

7.2.4 Spare and replacement parts are procured in such a manner that their performance and quality are at least equivalent to those of the parts that will be replaced.

a. Specifications and codes referenced in procurement documents for spare or replacement items are at least equivalent to those for the original items or to properly reviewed and approved revisions.

b. Parts intended as spares or replacements for "off-the-shelf" items, or other items for which quality requirements were not originally specified, are evaluated for performance at least equivalent to the original.

c. Where quality requirements for the original items cannot be determined, requirements and controls are established by engineering evaluation performed by qualified individuals. The evaluation assures there is no adverse effect on interfaces, interchangeability, safety, fit, form, function or compliance with applicable regulatory or code requirements. Evaluation results are documented.

d. Any additional or modified design criteria, imposed after previous procurement of the item(s), are identified and incorporated.

7.2.5 Receipt inspections are performed to verify that items are undamaged and properly identified, that they conform with safety-related procurement requirements not previously verified by source surveillance or inspection, and that required supplier furnished documentation is available. Items inspected are identified as to their acceptance status prior to their storage or release for installation.

7.2.6 Suppliers are required to furnish the following records:

a. Applicable drawings and related engineering documentation that identify the purchased item and the specific procurement requirements (eg, codes, standards and specifications) met by the item.

b. Documentation identifying any procurement requirements that have not been met.

c. A description of those nonconformances from the procurement requirements dispositioned "accept as is" or "repair."

d. Quality records as specified in the procurement requirements.

QA - Nuclear Operations or QAD - Plant Modifications evaluates the acceptability of these documents during source and/or receipt inspection.

7.2.7 Supplier's certificates of conformance are periodically evaluated by audits, independent inspections or tests to assure that they are valid. The results of these evaluations are documented.

8.1 POLICY

Materials, parts and components (items) are identified and controlled to prevent their inadvertent use. Identification of items is maintained either on the items, their storage areas or containers, or on records traceable to the items.

8.2 IMPLEMENTATION

8.2.1 Controls are established that provide for the identification and control of materials (including consumables), parts, and components, (including partially fabricated assemblies). Responsibility for the identification and control of items is described in Section 1.0, ORGANIZATION.

8.2.2 Items are identified by physically marking the item, its storage area or its container, or by maintaining records traceable to the item. The method of identification is such that the quality of the item is not degraded.

8.2.3 Items are traceable to applicable drawings, specifications or other pertinent documents to ensure that only correct and acceptable items are used. Verification of traceability is performed and documented prior to release for fabrication, assembly or installation.

8.0 IDENTIFICATION AND CONTROL OF ITEMS

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9.0 CONTROL OF SPECIAL PROCESSES

9.1 POLICY

Special processes are controlled and are accomplished by qualified personnel using qualified procedures and equipment in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

9.2 IMPLEMENTATION

9.2.1 Processes subject to special process controls at CP Co are those for which full verification or characterization by direct inspection is impossible or impractical. Such processes include welding, heat treating, chemical cleaning, application of protective coatings, application of Class F fireproofing, concrete placement, and nondestructive examination.

9.2.2 Organizational responsibility for implementation of special processes and for qualification of procedures, personnel, and equipment used to perform special processes is indicated in Section 1.0, ORGANIZATION.

9.2.3 Special process procedures are prepared by personnel with expertise in the discipline involved. The procedures are reviewed for technical adequacy by other personnel with the necessary technical competence, and are qualified by testing, as necessary.

9.2.4 Special process personnel qualification is determined by individuals authorized to administer the pertinent examinations. Certification is based on examination results. Personnel qualification is kept current by performance of the special process(es) and/or reexamination at time intervals specified by applicable codes, specifications and standards. Unsatisfactory performance or, where applicable, failure to perform within the designated time intervals requires recertification.

9.2.5 For special processes that require qualified equipment, such equipment is qualified in accordance with applicable codes, standards, and specifications.

9.2.6 Qualification records are maintained in accordance with QAPD Section 17.

9.2.7 The appropriate QA organizations audit special process qualification activities and perform inspection and surveillance of special processes to assure they are satisfactorily performed when specified by applicable inspection planning and/or site procedures. Such inspection and surveillance includes verification that process data are recorded as required, are within specified limits, and are performed in accordance with applicable requirements.

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10.0 INSPECTION

10.1 POLICY

Activities affecting the quality of safety-related structures systems and components are inspected to verify their conformance with requirements. These inspections are performed by people other than those who perform the activity being inspected. Direct inspection, process monitoring, or both, are used as necessary. Hold points are used as necessary to ensure that inspections are accomplished at the correct points in the sequence of work activities.

10.2 IMPLEMENTATION

10.2.1 Organizational responsibilities are as described in Section 1.0, ORGANIZATION.

10.2.2 Inspections are applied to procurement, maintenance, modification, testing, fuel handling, operation and inservice inspection to verify that items and activities conform to specified requirements. Work authorizing documents are reviewed by QA - Nuclear Operations or QAD - Plant Modifications in accordance with established criteria to do the following as necessary:

a. Determine the need for inspection(s).

b. Identify the inspection organization.

c. Identify hold and witness points.

d. Determine how and when the inspections are to be performed.

e. Specify measuring and test equipment of the necessary accuracy for performing inspection.

f. Provide for documentation of inspection results to provide adequate objective evidence of acceptability.

Inspection is performed at each operation where it is necessary to verify quality.

Process monitoring is used in whole or in part where direct inspection alone is impractical or inadequate.

10.2.3 Training and qualification programs for personnel who perform inspections, including nondestructive examination, are established, implemented and documented in accordance with Section 2.0, QUALITY ASSURANCE PROGRAM. These programs meet the requirements of applicable codes and standards. QA - Nuclear Operations or QAD - Plant Modifications review and concur with any such programs that are not under their direct responsibility. Qualifications and certifications of inspection and NDE personnel are maintained.

10.2.4 Inspection requirements are specified in procedures, instructions, drawings or checklists and are either provided or concurred with by QA - Nuclear Operations or QAD - Plant Modifications, as applicable. They provide for the following as appropriate:

a. Identification of applicable revisions of required instructions, drawings and specifications.

b. Identification of characteristics and activities to be inspected.

c. Inspection methods.

d. Specification of measuring and test equipment having the necessary accuracy.

e. Identification of personnel responsible for performing the inspection.

f. Acceptance and rejection criteria.

g. Recording of the inspection results and the identification of the inspector.

10.2.5 Inspection points are designated by QA - Nuclear Operations or QAD - Plant Modifications as mandatory hold points when confirmation is needed that the work accomplished up to that point is acceptable before the work can be allowed to proceed further. Hold point inspections are performed, and work is released for further processing or use, by designated inspection personnel. Hold points may be waived only by designated QA - Nuclear Operations or QAD - Plant Modifications personnel.

10.2.6 Inspections are performed and documented in accordance with the written instructions provided. The results are evaluated by designated personnel in order to ensure that the results substantiate the acceptability of the item or work. Evaluation and review results are documented.

10.2.7 Inspection of work associated only with normal operation of the plant, such as surveillance tests and verifications of routine maintenance may be performed by individuals in the same group as that which performed the work, but not by personnel who directly performed or supervised the work. Peer inspection is acceptable provided:

a. The quality of the work can be demonstrated through a functional test when the work involves breaching a pressure retaining item.

b. The qualification criteria for the inspection personnel have been reviewed and found acceptable by QA - Nuclear Operations.

11.0 TEST CONTROL

11.1 POLICY

Testing is performed in accordance with established programs to demonstrate that structures, systems and components w ll perform satisfactorily in service. The testing is performed in accordance with written procedures that incorporate specified requirements and acceptance criteria. The test program includes qualification (as applicable), acceptance, pre-operational, start-up, surveillance, and maintenance tests. Test parameters, including any prerequisites, instrumentation requirements and environmental conditions are specified and met. Test results are documented and evaluated.

11.2 IMPLEMENTATION

11.2.1 Organizational responsibilities for testing are described in Section 1.0, ORGANIZATION.

11.2.2 Tests are performed in accordance with programs, procedures and criteria that designate when tests are required and how they are to be performed. Such testing includes the following:

a. Qualification tests, as applicable, to verify design adequacy in accordance with Section 3.0, DESIGN CONTROL.

b. Acceptance tests of equipment and components to assure their proper operation prior to delivery or to pre-operational tests.

c. Pre-operational tests to assure proper and safe operation of systems and equipment prior to start-up tests or operations.

d. Start-up tests, including precritical, criticality, low-power and power ascension tests, performed after refueling to assure proper and safe operation of systems and equipment.

e. Surveillance tests to assure continuing proper and safe operation of systems and equipment.

f. Maintenance tests after preventive or corrective maintenance.

11.2.3 Test procedures and instructions include provisions for the following, as applicable:

a. The requirements and acceptance limits contained in applicable design and procurement documents.

b. Test prerequisites such as calibrated instrumentation, adequate test equipment and instrumentation including accuracy requirements, completeness of the item to be tested, suitable and controlled environmental conditions, and provisions for data collection and storage.

c. Instructions for performing the test.

d. Any mandatory hold points.

e. Acceptance and rejection criteria.

f. Methods of documenting or recording test data and results.

g. Provision for verifying that test prerequisites have been met.

h. Provision for QA verification of completion of modification activities.

Test procedures and instructions are reviewed by the engineering organizations for technical content and by QA - Nuclear Operations or QAD - Plant Modifications for QA aspects.

11.2.4 QA - Nuclear Operations or QAD - Plant Modifications, where applicable, verifies, through audits, inspection and surveillances, that test results are documented, evaluated and their acceptability is determined by responsible personnel.

12.0 CONTROL OF MEASURING AND TEST EQUIPMENT

12.1 POLICY

Measuring and testing equipment used in activities affecting the quality of safety-related systems, components, and structures are properly identified, controlled, calibrated and adjusted at specified intervals to maintain accuracy within necessary limits.

12.2 IMPLEMENTATION

12.2.1 The authority and responsibility of personnel establishing, implementing and assuring effectiveness of the calibration program is described in Section 1.0, ORGANIZATION.

12.2.2 Procedures are established for measuring and test equipment utilized in the measurement, inspection and monitoring of structures, systems and components. These procedures describe calibration technique and frequency, and maintenance and control of the equipment.

12.2.3 Measuring and test equipment is uniquely identified and is traceable to its calibration source.

12.2.4 CP Co uses a system of labels to be attached to measuring and test equipment to display the next calibration due date. Where labels cannot be attached, a control system is used that identifies to potential users any equipment beyond the calibration due date.

12.2.5 Measuring and test equipment is calibrated at specified intervals. These intervals are based on the amount of use, stability characteristics and other conditions that could adversely affect the required measurement accuracy. Reference and secondary calibration standards are traceable to nationally recognized standards where they exist. Where national standards do not exist, provisions are established to document the basis for calibration.

Reference standards that have at least four times the required accuracy of the item being calibrated are used to calibrate secondary standards. When this accuracy is not possible, these standards shall have an accuracy that assures that the equipment being calibrated will be within required tolerance. In such cases the basis of acceptance is documented, and is authorized by identified management.

Secondary standards shall normally have greater accuracy than equipment or installed plant instrumentation being calibrated. Standards with the same accuracy may be used when shown to be adequate for specific calibration requirements. The basis for this acceptance is documented and is approved by responsible management.

12.2.6 When measuring and testing equipment used for inspection and test is found to be outside of required accuracy limits at the time of calibration, evaluations are conducted to determine the validity of the results obtained since the most recent calibration. The results of evaluations are documented. Retests or reinspections are performed on suspect items.

13.0 HANDLING, STORAGE AND SHIPPING

13.1 POLICY

Activities with the potential for causing contamination or deterioration that could adversely affect the ability of an item to perform its safety-related functions and activities necessary to prevent undetected or uncorrectable damage are identified and controlled. These activities are cleaning, packaging, preserving, handling, shipping and storing. Controls are effected through the use of appropriate procedures and instructions implemented by suitably trained personnel.

13.2 IMPLEMENTATION

13.2.1 The authority and responsibility of personnel implementing and assuring the effectiveness of material cleaning, handling, storing, packaging, preserving and shipping activities is described in Section 1.0, ORGANIZATION.

13.2.2 Procedures are used to control the cleaning, handling, storing, packaging, preserving and shipping of materials, components and systems in accordance with design and procurement requirements. These procedures include, but are not limited to, the following functions:

a. Cleaning, to assure that required cleanliness levels are achieved and maintained

b. Packaging and preservation, to provide adequate protection against damage or deterioration. When necessary, these procedures provide for special environments such as inert gas atmospheres, specific moisture content levels and temperature levels.

c. Handling, to preclude damage or safety hazards.

d. Storing, to minimize the possibility of loss, damage to or deterioration of items in storage, including consumables such as chemicals, reagents and lubricants. Storage procedures also provide methods to assure that specified shelf lives are not exceeded.

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14.0 INSPECTION, TEST AND OPERATING STATUS

14.1 POLICY

Operating status of structures, systems and components is indicated by tagging of valves and switches, or by other specified means, in such a manner as to prevent inadvertent operation. The status of inspections and tests performed on individual items is clearly indicated by markings and/or logging under strict procedural controls to prevent inadvertent bypassing of such inspections and tests.

14.2 IMPLEMENTATION

14.2.1 Organizational responsibilities are as described in Section 1.0, ORGANIZATION.

14.2.2 For modification activities, including item fabrication, installation and test, procurement documents, service contracts and procedures specify the degree of control required for the indication of inspection and test status of structures, systems and components.

14.2.3 Application and removal of inspection and welding stamps and of such status indicators as tags, markings, labels, etc, are controlled by plant procedures.

14.2.4 The sequence of inspections, tests and other operations important to safety is controlled by procedures. Changes in the approved sequence are subject to the same review and approval as the original.

14.2.5 QA - Nuclear Operations or QAD - Plant Modifications reviews and concurs with procurement packages, contracts, and procedures for inspections, tests and other operations important to safety.

14.2.6 The status of nonconforming, inoperable or malfunctioning structures, systems and components is clearly identified and documented to prevent inadvertent use.

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15.0 NONCONFORMING MATERIALS, PARTS OR COMPONENTS

15.1 POLICY

Materials, parts or components that do not conform to requirements are controlled in order to prevent their inadvertent use. Nonconforming items are identified, documented, segregated when practical and dispositioned. Affected organizations are notified of nonconformances.

15.2 IMPLEMENTATION

15.2.1 Items, services or activities that are deficient in characteristic, documentation or procedure, which render the quality unacceptable or indeterminate, are identified as nonconforming and any further use is controlled. Nonconformances are documented and dispositioned, and notification is made to affected organizations. Personnel authorized to disposition, conditionally release and close out nonconformances are designated. The authority and responsibility for the implementation of activities related to the processing and control of nonconforming materials, parts or components are described in Section 1.0, ORGANIZATION.

a. Nonconforming items are identified by marking, tagging or segregating, or by documented administrative controls. Documentation describes the nonconformance, the disposition of the nonconformance and the inspection requirements. It also includes signature approval of the disposition.

b. QA - Nuclear Operations or QA - Plant Modifications, as appropriate, reviews the disposition of nonconformances, and documents concurrence with the acceptance, conditional release, or repair of a nonconforming item.

c. Items that have been repaired or reworked are inspected and tested in accordance with the original inspection and test requirements or alternatives that have been documented as acceptable and concurred with by QA - Nuclear Operations or QA - Plant Modifications.

d. Items that have the disposition of "repair" or "use as is" require documentation justifying acceptability. The changes are recorded to denote the as-built condition.

15.2.2 Dispositions of conditionally released items are closed out before the items are relied upon to perform safety-related functions.

15.2.3 Prior to the initiation of preoperational testing on an item, all nonconformances are corrected or evaluated for possible impact upon the item or any facet of the testing program.

15.2.4 QA - Nuclear Operations (or QA - Plant Modifications for major modifications) analyzes nonconformance reports to identify quality trends. Trend reports, which highlight significant results, are issued periodically to upper management for review and assessment.

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16.0 CORRECTIVE ACTION

16.1 POLICY

Conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are identified promptly and corrected as soon as practical.

For significant conditions adverse to quality, the cause of the condition is determined and corrective action is taken to preclude repetition. In these cases, the condition, cause and corrective action taken is documented and reported to appropriate levels of management.

16.2 IMPLEMENTATION

16.2.1 The responsibility and authority for the control of corrective action are described in Section 1.0, ORGANIZATION.

16.2.2 Controls are established to assure that conditions adverse to quality are identified and documented, and that appropriate remedial action is taken. For significant conditions adverse to quality, necessary corrective action is promptly determined and recorded. Corrective action includes determining the cause and extent of the condition, and taking appropriate action to preclude similar problems in the future. The controls also assure that corrective action is implemented in a timely manner.

16.2.3 The identified conditions, their causes, and corrective actions taken are reported to appropriate levels of management for review and assessment. QA - Nuclear Operations or QAD - Plant Modifications reviews and documents concurrence with actions taken to prevent recurrence, perform follow-up to verify proper implementation, and determine if additional action (such as audit or surveillance) is necessary to verify the effectiveness of action taken.

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17.0 QUALITY ASSURANCE RECORDS

17.1 POLICY

Records that furnish evidence of activities affecting the quality of safety-related structures, systems and components are maintained. They are accurate, complete and legible and are protected against damage, deterioration or loss. They are identifiable and retrievable.

17.2 IMPLEMENTATION

17.2.1 Responsibilities for the identification and control of QA records are described in Section 1.0, ORGANIZATION.

17.2.2 Documents that furnish evidence of activities affecting quality are generated and controlled in accordance with the procedures that govern those activities. Upon completion, these documents are considered records. These records include:

a. Results of reviews, inspections, surveillances, tests, audits and material analyses

b. Qualification of personnel, procedures and equipment

c. Operating logs

d. Maintenance and modification procedures and related inspection results

e. Reportable occurrences

f. Records required by the plant technical specifications

g. Nonconformance reports

h. Corrective action reports

i. Other documentation such as drawings, specifications, procurement documents, calibration procedures and reports

17.2.3 Inspection and test records contain the following where applicable:

a. A description of the type of observation

b. The date and results of the inspection or test

c. Information related to conditions adverse to quality

d. Inspector or data recorder identification

e. Evidence as to the acceptability of the results

f. Action taken to resolve any discrepancies noted

17.2.4 When a document becomes a record, it is designated as permanent or nonpermanent and then transmitted to file. Nonpermanent records have specified retention times. Permanent records are maintained for the life of the item.

17.2.5 Only authorized personnel may issue corrections or supplements to records.

17.2.6 Traceability between the record and the item or activity to which it applies is provided.

17.2.7 Except for records that can only be stored as originals, such as radiographs and some strip charts, records are stored in remote, dual facilities to prevent damage, deterioration or loss due to natural or unnatural causes. When only the single original can be retained, special fire-rated facilities are used.

18.0 AUDITS

18.1 POLICY

A comprehensive system of audits is carried out to provide independent evaluation of compliance with and the effectiveness of the Quality Assurance Program, including those elements of the program implemented by suppliers and contractors. Audits are performed in accordance with written procedures or checklists by qualified personnel not having direct responsibility in the areas audited. Audit results are documented and are reviewed by management. Follow-up action is taken where indicated.

18.2 IMPLEMENTATION

18.2.1 Responsibility and authority for the audit program is described in Section 1.0, ORGANIZATION.

18.2.2 Internal audits are performed in accordance with established schedules that reflect the status and importance to safety of the activities being performed. All areas where the requirements of 10 CFR 50 Appendix B apply are audited within a period of two years. The following are audited at least once every 12 months:

a. Conformance of facility operations with applicable conditions of the technical specifications and license

b. The performance, training and qualifications of the facility staff

c. Controls over plant modifications performed by the Nuclear Operations Department

18.2.3 Audits of suppliers and contractors are scheduled based on the status and safety importance of the activities being performed, and are initiated early enough to assure effective quality assurance during design, procurement, manufacturing, construction, installation, inspection and testing.

18.2.4 Principal contractors are required to audit their suppliers systematically in accordance with the foregoing scheduling criteria.

18.2.5 Regularly scheduled audits are supplemented by special audits when significant changes are made in the Quality Assurance Program, when it is suspected that quality is in jeopardy, or when an independent assessment of program effectiveness is considered necessary.

18.2.6 Audits include an objective evaluation of quality-related practices, procedures, instructions, activities and items, and review of documents and records to confirm that the QA Program is effective and properly implemented.

18.2.7 Audit procedures and the scope, plans, checklists and results of individual audits are documented.

18.2.8 Personnel selected for auditing assignments have experience or are given training commensurate with the needs of the audit and have no direct responsibilities in the areas audited.

18.2.9 Audit data are analyzed by QA - Nuclear Operations or by E&QA. The resulting report identifies any quality deficiencies and assesses the effectiveness of the QA Program. The reports are distributed to the responsible management of both the audited and auditing organizations.

18.2.10 Management of the audited organization identifies and takes appropriate corrective action to correct observed deficiencies and to prevent recurrence of any significant conditions adverse to quality. Follow-up is performed by QA - Nuclear Operations or E&QA to ensure that the appropriate corrective action is taken and is effective. Such follow-up includes reaudits when necessary.

18.2.11 Reports of audits described in Plant Technical Specifications are reviewed by the NSB or by NAPO subject to review and approval of the NSB Chairman or the Executive Engineer - NAPO.

QAPD MANUAL
APPENDIX A, PART 1
REGULATORY GUIDE AND ANSI STANDARD COMMITMENTS

The Consumers Power Company Quality Assurance Program complies with the regulatory position of the Regulatory Guides referenced in this appendix as modified by the exceptions stated in Part 2.

1. Appendix B to 10 CFR, Part 50, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants.

2. 10 CFR, Part 50.55a - Codes and Standards.

3. Regulatory Guide 1.8 - (9/80 Draft) - Personnel Qualification and Training - Endorses ANSI/ANS 3.1 - (12/79 Draft).

4. Regulatory Guide 1.26 - (2/76, Rev 3) - Quality Group Classification, and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants.

5. Regulatory Guide 1.29 - (9/78, Rev. 3) - Seismic Design Classification.

6. Regulatory Guide 1.30 (Safety Guide 30) - (8/11/72) - Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electrical Equipment - Endorses ANSI N45.2.4 - 1972.

7. Regulatory Guide 1.33 - (2/78, Rev 2) - Quality Assurance Program Requirements (Operation) - Endorses ANSI N18.7 - 1976.

8. Regulatory Guide 1.37 - (3/16/73) - Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants - Endorses ANSI N45.2.1 - 1973.

9. Regulatory Guide 1.38 - (5/77, Rev 2) - Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants - Endorses ANSI N45.2.2 - 1972.

10. Regulatory Guide 1.39 - (9/77, Rev 2) - Housekeeping Requirements for Water-Cooled Nuclear Power Plants - Endorses ANSI N45.2.3 - 1973.

11. Regulatory Guide 1.58 - (9/80, Rev 1) - Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel - Endorses N45.2.6 - 1978.

12. Regulatory Guide 1.64 - (6/76, Rev 2) - Quality Assurance Requirements for the Design Of Nuclear Power Plants - Endorses N45.2.11 - 1974.

13. Regulatory Guide 1.74 - (2/74) - Quality Assurance Requirements Terms and Definitions - Endorses ANSI N45.2.10 - 1973.

14. Regulatory Guide 1.88 - (10/76, Rev 2) - Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records - Endorses N45.2.9 - 1974.

15. Regulatory Guide 1.94 - (4/76, Rev 1) - Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants - Endorses ANSI N45.2.5 - 1974.

16. Regulatory Guide 1.116 - (5/77) - Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems - Endorses ANSI N45.2.8 - 1975.

17. Regulatory Guide 1.123 - (7/77, Rev 1) - Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants - Endorses N45.2.13 - 1976.

18. Regulatory Guide 1.144 - (9/80, Rev 1) - Auditing of Quality Assurance Programs for Nuclear Power Plants - Endorses N45.2.12 - 1977.

19. Regulatory Guide 1.146 - (8/80) - Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants - Endorses N45.2.23 - 1978.

20. Branch Technical Position ASB9.5.1 (Rev 1) Guidelines for Fire Protection for Nuclear Power Plants.

QAPD MANUAL
APPENDIX A, PART 2
CP CO EXCEPTIONS TO OPERATING PHASE STANDARDS AND REGULATORY GUIDES

1. General

Requirement

Certain Regulatory Guides invoke or imply Regulatory Guides and standards in addition to the standard each primarily endorses.

Certain ANSI Standards invoke or imply additional standards.

Exception/Interpretation

The CP Co commitment refers to the Regulatory Guides and ANSI Standards specifically identified in Appendix A, Part 1. Additional Regulatory Guides, ANSI Standards and similar documents implied or referenced in those specifically identified are not part of this commitment.

2. N18.7 General

Exception/Interpretation

Consumers Power Company has established both an organizational unit and a standing committee for independent review activities. Together they form the independent review body.

The standard numeric and qualification requirement may not be met by each group individually. Procedures will be established to specify how each group will be involved in review activities.

2a. N18.7, Sec 3.4.1

Requirement

"The Plant Manager shall have overall responsibility for the execution of the administrative controls and quality assurance program at the plant to assure safety."

Exception/Interpretation

Since CP Co has more than one nuclear unit and more than one organization providing services to these units, overall responsibility cannot be centralized in a single on-site position. Instead, responsibilities are as designated within the QA Program Description.

2b. Sec 4.3.1

Requirement

"Personnel assigned responsibility for independent reviews shall be specified in both number and technical disciplines, and shall collectively have the experience and competence required to review problems in the following areas:..."

Exception/Interpretation

The Nuclear Activities Plant Organization (NAPO) will not have members specified by number or by technical disciplines and its members may not have the experience and competence required to review problems in all areas listed in this section; however, the NSB will be specified by number and discipline.

The NSB will not specifically include a member qualified in Nondestructive Testing but will use qualified technical consultants to perform this function as determined necessary by the NSB Chairman.

2c. Sec 4.3.2.1

Requirement

"When a standing committee is responsible for the independent review program, it shall be composed of no less than five persons of whom no more than a minority are members of the onsite operating organization. Competent alternatives are permitted if designated in advance. The use of alternates shall be restricted to legitimate absences of principals."

Exception/Interpretation

See Item 2b.

2d. Sec 4.3.3.1

Requirement

"...recommendations... shall be disseminated promptly to appropriate members of management having responsibility in the area reviewed."

Exception/Interpretation

Recommendations made as a result of reviews will generally be conveyed to the onsite or offsite standing committee. Procedures will be maintained specifying how recommendations are to be considered.

2e. Sec 4.3.4

Requirement

"The following subjects shall be reviewed by the independent review body:"

Exception/Interpretation

Subjects requiring review will be as specified in the Plant Technical Specifications.

2f. Sec 4.3.4(3)

Requirement

"Changes in the Technical Specifications or license amendments relating to nuclear safety are to be reviewed by the independent review body prior to implementation, except in those cases where the change is identical to a previously reviewed proposed change.

Exception/Interpretation

The Nuclear Safety Assessment and Policy (NSAP) organization will not review Technical Specification Changes after NRC approval prior to implementation. The basis for this position is that NSAP reviews all Technical Specification changes prior to submittal to the NRC.

2g. Sec 4.4

Requirement

The onsite operating organization shall provide, as part of the normal duties of plant supervisory personnel,..."

Exception/Interpretation

Some of the responsibilities of the onsite operating organization described in Section 4.4 may be carried out by NAPO as described in plant technical specifications.

2h. Sec 4.5

Requirement

"Written reports of audits specified in ANSI N18.7 shall be reviewed by the independent review body and by appropriate members of Management including those having responsibility in the area audited."

Exception/Interpretation

The independent review body reviews or arranges for reviews of those audits over which it has cognizance, in accordance with the individual plant Technical Specifications.

Some of the QA audits required during the operational phase are in areas other than those requiring independent review in accordance with ANSI N18.7, Section 4.3.4.

2i. Sec 5.2.1

Requirement

"The responsibilities and authorities of the plant operating personnel shall be delineated."

Exception/Interpretation

On-site personnel not directly associated with operating activities, as defined in ANSI N18.7, Section 2.2, are not considered to be operating personnel.

2j. Sec 5.2.2

Requirement

"Temporary changes, which clearly do not change the intent of the approved procedure, shall as a minimum be approved by two members of the plant staff 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 operators license on the unit affected."

Exception/Interpretation

CP Co considers that this requirement applies only to procedures identified in plant technical specifications. Temporary changes to these procedures shall be approved as described in plant technical specifications.

2k. Sec 5.2.6

Requirement

"In cases where required documentary evidence is not available, the associated equipment or materials must be considered nonconforming in accordance with Section 5.2.14. Until suitable documentary 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."

Exception/Interpretation

CP Co initiates appropriate corrective action when it is discovered that documentary evidence does not exist for a test or inspection which is required to verify equipment acceptability. This action includes a technical evaluation of the equipment's operability status.

21. Sec 5.2.8

Requirement

"A surveillance testing and inspection program...shall include the establishment of a master surveillance schedule reflecting the status of all planned inplant surveillance tests and inspections."

Exception/Interpretation

Separate master schedules may exist for different programs such as ISI, Pump and Valve Testing, and Technical Specification Surveillance Testing.

2m. Sec 5.2.13.1

Requirement

"To the extent necessary, procurement documents shall require suppliers to provide a quality assurance program consistent with the pertinent requirements of ANSI N45.2 - 1971."

Exception/Interpretation

To the extent necessary, procurement documents require that the supplier have a documented quality assurance program consistent with the pertinent requirements of ANSI N45.2 or other nationally recognized codes and standards.

2n. Sec 5.2.13.2

Requirement

ANSI N18.7 and N45.2.13 specify that where required by code, regulation or contract, documentary evidence that items conform to procurement requirements shall be available at the nuclear power plant site prior to installation or use of such items.

Exception/Interpretation

The required documentary evidence is available at the site prior to use, but not necessarily prior to installation. This allows installation to proceed while any missing documents are being obtained, but precludes dependence on the item for safety purposes.

2o. Sec 5.2.16

Requirement

Records shall be made and equipment suitably marked to indicate calibration status.

Exception/Interpretation

See Item 9b.

2p. Sec 5.3.5(4)

Requirement

This section requires that where sections of documents such as vendor manuals, operating and maintenance instructions or drawings are incorporated directly or by reference into a maintenance procedure, they shall receive the same level of review and approval as operating procedures.

Exception/Interpretation

Such documents are reviewed by appropriately qualified personnel prior to use to ensure that, when used as instructions, they provide proper and adequate information to ensure the required quality of work. Maintenance procedures which reference these documents receive the same level of review and approval as operating procedures.

3a. RG 1.33, Sec C4a

Requirement

The results of actions taken to correct deficiencies that affect nuclear safety and occur in facility equipment, structures, systems or method of operation are to be audited at least once per six months.

Exception/Interpretation

The corrective action system trend reports are reviewed by the independent review body twice annually. In addition, the corrective action system is audited at least once every two years with additional audits and investigations performed as indicated necessary by the trend report reviews.

4a. ANS 3.1, General

Exception/Interpretation

The CP Co commitment in this QA Program Description to ANS 3.1 is limited to those requirements which apply to the training and qualification of personnel performing QA/QC functions.

5a. RG 1.8, C.3.1

Exception/Interpretation

The CP Co commitment in this QA Program Description is limited to those requirements which apply to the training and qualification of personnel performing QA/QC functions.

5b. C1.2.2

Requirement

"When an individual is hired to temporarily function as a plant employee, such as for contracted services, evidence of previous education, experience, and training should be provided and reviewed by the appropriate professional-technical group leaders. The appropriate group leaders should then determine the content for that individual's training, including plant-specific training. As a minimum, each individual should receive General Employee Training."

Exception/Interpretation

CP Co understands that this requirement applies both to CP Co employees from another site and to contract personnel who are temporarily assigned to a nuclear power plant either as replacements for regular employees or to augment the staff during outages. CP Co employees so assigned possess the required qualifications as a prerequisite to the assignment and the review is waived. The qualifications of contract personnel are reviewed and arrangements made for any necessary training. All temporarily assigned personnel receive the site general orientation as embodied in Visitor Indoctrination Program for Unescorted Visitors.

6a. N45.2.1, Sec 2

Requirement

N45.2.1 establishes criteria for classifying items into "cleanness levels," and requires that items be so classified.

Exception/Interpretation

Instead of using the cleanness level classification system of N45.2.1, the required cleanness for specific items and activities is addressed on a case-by-case basis.

Cleanness is maintained, consistent with the work being performed, so as to prevent the introduction of foreign material. As a minimum, cleanness inspections are performed prior to system closure. Such inspections are documented.

6b. Sec 5

Requirement

"Fitted and tack-welded joints (which will not be immediately sealed by welding) shall be wrapped with polyethylene or other nonhalogenated plastic film until the welds can be completed."

Exception/Interpretation

CP Co sometimes uses other nonhalogenated material, compatible with the parent material, since plastic film is subject to damage and does not always provide adequate protection.

7a. N45.2.2, General

Requirement

N45.2.2 establishes requirements and criteria for classifying safety-related items into protection levels.

Exception/Interpretation

Instead of classifying safety-related items into protection levels, controls over the packaging, shipping, handling and storage of such items are established on a case-by-case basis with due regard for the item's complexity, use and sensitivity to damage. Prior to installation or use, the items are inspected and serviced as necessary to assure that no damage or deterioration exists which could affect their function.

7b. Sec 3.9 and Appendix A 3.9

Requirement

"The item and the outside of containers shall be marked."

(Further criteria for marking and tagging are given in the appendix.)

Exception/Interpretation

These requirements were originally written for items packaged and shipped to construction projects. Full compliance is not always necessary in the case of items shipped to operating plants and may, in some cases, increase the probability of damage to the item. The requirements are implemented to the extent necessary to assure traceability and integrity of the item.

7c. Sec 5.2.2

Requirement

"Receiving inspections shall be performed in an area equivalent to the level of storage."

Exception/Interpretation

Receiving inspection area environmental controls may be less stringent than storage environmental requirements for an item. However, such inspections are performed in a manner and in an environment which do not endanger the required quality of the item.

7d. Sec 6.2.4

Requirement

"The use or storage of food, drinks and salt tablet dispensers in any storage area shall not be permitted."

Exception/Interpretation

Packaged food for emergency or extended overtime use may be stored in material stock rooms. The packaging assures that materials are not contaminated. Food will not be "used" in these areas.

7e. Sec 6.3.4

Requirement

"All items and their containers shall be plainly marked so that they are easily identified without excessive handling or unnecessary opening of crates and boxes."

Exception/Interpretation

See N45.2.2, Section 3.9 (Exception 7b.).

7f. Sec 6.4.1

Requirement

"Inspections and examinations shall be performed and documented on a periodic basis to assure that the integrity of the item and its container...is being maintained."

Exception/Interpretation

The requirement implies that all inspections and examinations of items in storage are to be performed on the same schedule. Instead, the inspections and examinations are performed and documented in accordance with material storage procedures which identify the characteristics to be inspected and include the required frequencies. These procedures are based on technical considerations which recognize that inspections and frequencies needed vary from item to item.

8a. N45.2.3, Sec 2.1

Requirement

Cleanness requirements for housekeeping activities shall be established on the basis of five zone designations.

Exception/Interpretation

Instead of the five-level zone designation system referenced in ANSI N45.2.3, CP Co bases its controls over housekeeping activities on a consideration of what is necessary and appropriate for the activity involved. The controls are effected through procedures or instructions which, in the case of maintenance or modifications work, are developed on a case-by-case basis. Factors considered in developing the procedures and instructions include cleanliness control, personnel safety, fire prevention and protection, radiation control and security. The procedures and instructions make use of standard janitorial and work practices to the extent possible. However, in preparing these procedures, consideration is also given to the recommendations of Section 2.1 of ANSI N45.2.3.

9a. N45.2.4, Sec 2.2

Requirement

Section 2.2 establishes prerequisites which must be met before the installation, inspection and testing of instrumentation and electrical equipment may proceed. These prerequisites include personnel qualification, control of design, conforming and protected materials, and availability of specified documents.

Exception/Interpretation

During the operations phase, this requirement is considered to be applicable to modifications and initial start-up of electrical equipment. For routine or periodic inspection and testing, the prerequisite conditions will be achieved as necessary.

9b. Sec 6.2.1

Requirement

"Items requiring calibration shall be tagged or labeled on completion, indicating date of calibration and identity of person that performed the calibration."

Exception/Interpretation

Frequently, physical size and/or location of Installed Plant Instrumentation (IPI) mandates that calibration labels or tags not be affixed to IPI. Instead, each instrument is uniquely identified and is traceable to its calibration record.

A scheduled calibration program assures that each instrument's calibration is current.

10a. N45.2.3, Sec 2.5.2

Requirement

"When discrepancies, malfunctions or inaccuracies in inspection and testing equipment are found during calibration, all items inspected with that equipment since the last previous calibration shall be considered unacceptable until an evaluation has been made by the responsible authority and appropriate action taken."

Exception/Interpretation

CP Co uses the requirements of N18.7, Section 5.2.16, rather than N45.2.5, Section 2.5.2. The N18.7 requirements are more applicable to an operating plant.

10b. Sec 5.4

Requirement

"Hand torque wrenches used for inspection shall be controlled and must be calibrated at least weekly and more often if deemed necessary. Impact torque wrenches used for inspection must be calibrated at least twice daily."

Exception/Interpretation

Torque wrenches are controlled as measuring and test equipment in accordance with ANSI N18.7, Section 5.2.16. Calibration intervals are based on use and calibration history rather than as per N45.2.5.

11a. N45.2.6, Sec 1.2

Requirement

"The requirements of this standard apply to personnel who perform inspections, examinations, and tests during fabrication prior to and during receipt of items at the construction site, during construction, during preoperational and start-up testing, and during operational phases of nuclear power plants."

Exception/Interpretation

Personnel participating in testing who take data or make observations, where special training is not required to perform this function, need not be qualified in accordance with ANSI N45.2.6 but need only be trained to the extent necessary to perform the assigned function.

12a. RG 1.58, Sec C.1

Requirement

"However, for qualification of personnel (1) who approve preoperational, start-up and operational test procedures and test results and (2) who direct or supervise the conduct of individual preoperational, start-up and operational tests, the guidelines contained in Regulatory Guide 1.8, Personnel Selection and Training, should be followed in lieu of the Guidelines of ANSI N45.2.6 - 1978."

Exception/Interpretation

This requirement is interpretated to not apply to System Protection and Laboratory Services and Plant Modifications & Miscellaneous Projects (offsite support organizations). These departments have developed their qualification programs based on ANSI N45.2.6 and provide services throughout the construction and operation phases of CP Co Nuclear Plants. These programs include the certification of the First Line Supervisors to ANSI N45.2.6 and additional specific requirements determined by the work activity involved.

12b. Sec C.5

Requirement

"In addition, the individual should be capable of reviewing and approving inspection, examination, and testing procedures and of

evaluating the adequacy of such procedures to accomplish the inspection, examination, and test objectives."

Exception/Interpretation

While a Level III individual should be capable of reviewing and approving inspection, examination and testing procedures and of evaluating the adequacy of such procedures to accomplish the inspection, examination and test objectives, this is not construed by CP Co as requiring personnel who review, approve or evaluate such procedures to be certified as Level III personnel.

12c. Sec C.6

Requirement

"Since only one set of recommendations is provided for the education and experience of personnel, a commitment to comply with the regulatory position of this guide in lieu of providing an alternative to the recommendations of the standard means that the specified education and experience recommendations of the standard will be followed."

Exception/Interpretation

The education and experience recommendations given in ANSI N45.2.6, Section 3.5 will be treated as such, since our qualification and certification program is based upon these recommendations, and more significantly, upon satisfactory completion of capability testing prior to certification. It is our position that a candidate should not be required to be a high school graduate or have earned the GED equivalent for the above reasons.

12.d Sec C.10

Requirement

"Use of the measures outlined in these actions to establish that an individual has the required qualifications in lieu of required education and experience should result in documented evidence (ie, procedure and record of written test) demonstrating that the individual indeed does have comparable or equivalent competence to that which would be gained from having the required education and experience."

Exception/Interpretation

We will maintain documented objective evidence that demonstrates that an individual does have "comparable" or "equivalent" competence to that which would be gained from having the required education and experience. However, this may take the form of documentation other than "procedures and records of written test" such as documentation of oral tests and on-the-job performance demonstrations.

12e. General

Imposition of these Regulatory Guides on CP Co suppliers and subtier suppliers will be on a case-by-case basis depending upon the item or service to be procured.

13a. N45.2.8, Sec 2.9e

Requirement

Section 2.9e of N45.2.8 lists documents relating to the specific stage of installation activity which are to be available at the construction site.

Exception/Interpretation

All of the documents listed are not necessarily required at the construction site for installation and testing. CP Co assures that they are available to the site as necessary.

13b. Sec 2.9e

Requirement

Evidence that engineering or design changes are documented and approved shall be available at the construction site prior to installation.

Exception/Interpretation

Equipment may be installed before final approval of engineering or design changes. However, the system is not placed into service until such changes are documented and approved.

13c. Sec 4.5.1

Requirement

"Installed systems and components shall be cleaned, flushed and conditioned according to the requirements of ANSI N45.2.1. Special consideration shall be given to the following requirements:...." (Requirements are given for chemical conditioning, flushing and process controls.)

Exception/Interpretation

Systems and components are cleaned, flushed and conditioned as determined on a case-by-case basis. Measures are taken to help preclude the need for cleaning, flushing and conditioning through good practices during maintenance or modification activities.

14a. N45.2.9, Sec 5.4, Item 2

Requirement

"Records shall be firmly attached in binders or placed in folders or envelopes for storage in steel file cabinets or on shelving in containers."

Exception/Interpretation

Records are suitably stored in steel file cabinets or on shelving in containers. Methods other than binders, folders or envelopes (for example, dividers) may be used to organize the records for storage.

14b. Sec 6.2

Requirement

"A list shall be maintained designating those personnel who shall have access to the files."

Exception/Interpretation

Rules are established governing access to and control of files as provided for in ANSI N45.2.9, Section 5.3, Item 5. These rules do not always include a requirement for a list of personnel who are authorized access. It should be noted that duplicate files and/or microforms exist for general use and backup.

15a. RG 1.64, C2

Requirement

"Regardless of their title, individuals performing design verification should not(1) have immediate supervisory responsibility for the individual performing the design...."

Exception/Interpretation

CP Co follows Section 3E4(a) of the Standard Review Plan, which states: "In exceptional circumstances, the designer's immediate supervisor can perform the verification, provided:

1. The supervisor is the only technically qualified individual.

2. The need is individually documented and approved in advance by the supervisors management.

3. QA audits cover frequency and effectiveness of use of supervisors as design verifiers to guard against abuse."

16a. RG 1.144, Sec C3a(1)

Requirement

This section requires that for operational phase activities, RG 1.33 "Quality Assurance Program Requirements (Operations)" are to be followed. One of the RG 1.33 requirements is that the results of actions taken to correct deficiencies that affect nuclear safety and occur in facility equipment, structures, systems, or method of operation are to be audited at least once per six months.

Exception/Interpretation

See Item 3a for the exception to this requirement.

16b. Sec C3a(2)

Requirement

"Design and construction phase activities shall be audited at least annually or at least once within the activity, whichever is shorter."

Exception/Interpretation

Since most modifications are straightforward, they are not audited individually. Instead, selected controls over modifications are audited periodically.

16c. Sec C3b(1)

Requirement

This section identifies procurement contracts which are exempted from being audited.

Exception/Interpretation

In addition to the exemptions of RG 1.144, CP Co considers that the National Bureau of Standards or other State and Federal Agencies which may provide services to CP Co are not required to be audited.

17a. N45.2.13, Sec 3.2.2

Requirement

N45.2.13 requires that technical requirements be specified in procurement documents by reference to technical requirement documents. Technical requirement documents are to be prepared, reviewed and released under the requirements established by ANSI N45.2.11.

Exception/Interpretation

For replacement parts and materials, CP Co follows ANSI N18.7, Section 5.2.13, Subitem 1, which states: "Where the original item or part is found to be commercially 'off the shelf' or without specifically identified QA requirements, spare and replacement parts may be similarly procured, but care shall be exercised to ensure at least equivalent performance."

17b. Sec 3.2.3

Requirement

"Procurement documents shall require that the supplier have a documented quality assurance program that implements parts or all of ANSI N45.2 as well as applicable quality assurance program requirements of other nationally recognized codes and standards."

Exception/Interpretation

Refer to Item 2i.

17c. Sec 3.3(a)

Requirement

Reviews of procurement documents shall be performed prior to release for bid and contract award.

Exception/Interpretation

Documents may be released for bid or contract award before completing the necessary reviews. However, these reviews are completed before the item or service is put into service, or before work has progressed beyond the point where it would be impractical to reverse the action taken.

17d. Sec 3.3(b)

Requirement

"Changes made in the procurement documents as a result of the bid evaluations or precontract negotiations shall be incorporated into the procurement documents. The review of such changes and their effects shall be completed prior to contract award."

Exception/Interpretation

This requirement applies only to quality related changes (ie, changes to the procurement document provisions identified in ANSI N18.7, Section

5.2.13.1, Subitems 1 through 5.) The timing of reviews will be the same as for review of the original procurement document.

17e. Sec 10.1

Requirement

"Where required by code, regulation or contract requirement, documentary evidence that items conform to procurement documents shall be available at the nuclear power plant site prior to installation or use of such items, regardless of acceptance methods."

Exception/Interpretation

Refer to Item 2j.

17f. Sec 10.3.4 (as modified by RG 1.123, C6e)

Requirement

"Post-installation test requirements and acceptance documentation shall be mutually established by the purchaser and supplier."

Exception/Interpretation

In exercising its ultimate responsibility for its QA program, CP Co establishes post-installation test requirements, giving due consideration to supplier recommendations.

18a. RG 1.26, General

Requirement

RG 1.26 establishes a system for classifying pressure boundary items into four quality groups, which are then correlated with ASME B&PV Code and ANSI Standards requirements. However, RG 1.26 does not indicate which of the four quality groups are safety related, and which are not.

Exception/Interpretation

1. RG 1.26 is not used as a basis for establishing the lists of safety-related items for the Palisades and Big Rock Point Plants since the codes referenced in Table 1 did not exist when these Plants were designed (ASME B&PV, Section III). Items in these Plants are classified as safety related or nonsafety related in accordance with Regulatory Guide 1.29.

2. For the Midland Plant, items falling into Groups A, B and C are considered to be safety-related. Group D items are not.

19a. Branch Technical Position ASB9.5.1, General