NEBRASKA PUBLIC POWER DISTRICT

COOPER NUCLEAR STATION

QUALITY ASSURANCE PROGRAM FOR OPERATION

POLICY DOCUMENT

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont'd)

TABLE OF CONTENTS (Cont'd)

TABLE OF CONTENTS (Cont'd)

CORPORATE POLICY STATEMENT

This document establishes and describes the policies and practices of the Quality Assurance Program applicable to the operation of the Cooper Nuclear Station and the support activities of all NPPD Nuclear Divisions. The District's policy with respect to nuclear safety and quality assurance is detailed in Section 1.2 of this document.

Each Nuclear Division is responsible for the development of policies and procedures which implement this Quality Assurance Program. Other divisions and departments at NPPD may also have responsibilities under this program and shall comply as described in appropriate implementing procedures.

The Safety Review and Audit Board, Station Operations Review Committee, and the Quality Assurance Division shall monitor the District's nuclear program and provide management with evaluations and assessments regarding the effectiveness of the implementation of the program. When evaluations and assessments identify a concern, management shall take expeditious action to correct any undesirable condition(s) including, where appropriate, action to preclude repetition of such condition(s).

District personnel shall have the organizational freedom to identify concerns and propose corrective and preventive action necessary to enhance the District's nuclear program.

The assurance of safe and reliable operation of Cooper Nuclear Station is everyone's duty. Quality shall be everyone's responsibility.

APPROVED:

President

~~Nuclear Power Group Manager~~
Vice President - Nuclear

Vacant
Vice President - Production

Division Manager - Quality Assurance

COOPER NUCLEAR STATION
QUALITY ASSURANCE PROGRAM FOR OPERATION
POLICY DOCUMENT

1.0 PROGRAM DEFINITION

In accordance with the conditions of the Nuclear Regulatory Commission construction permit and operating license for the Cooper Nuclear Station, the management of Nebraska Public Power District recognizes its responsibility for assuring that the Cooper Nuclear Station is designed, constructed, and operated in such a manner as to provide for the safety of the public. The importance of Quality Assurance in contributing to this safety as well as contributing to station reliability is also recognized.

The initial phases of the overall Quality Assurance Program, implemented during design and construction, provided an independent check for the work performed on components, structures, and systems of the station to assure that the design, analysis, materials of construction, manufacture, installation, erection, and construction met quality standards required to assure reliable and safe operation. The CNS Quality Assurance Program for Operation, as described herein, is implemented to provide an independent quality check on all phases of station operation, maintenance, and modification.

1.1 Purpose

The purpose of this policy document is to provide a description of the Quality Assurance Program to be followed during the operational phase of Cooper Nuclear Station and to identify applicability of the policies and procedures described herein. This CNS Quality Assurance Program for Operation was developed by Nebraska Public Power District in response to the requirements of 10CFR50, Appendix B. It provides a general description

of the Quality Assurance Program for Operation and requires that detailed instructions, procedures, and drawings, as appropriate, be set forth in writing and carried out by each of the responsible organizations or individuals within the District.

1.2 Policy

It is the policy of Nebraska Public Power District (NPPD) to use its best efforts to assure that the Cooper Nuclear Station is designed, constructed, maintained, and operated in a manner that will provide the highest practical degree of safety and reliability. Structures, components, and systems are designed, fabricated, erected, maintained, and modified to quality standards appropriate to their importance to the safety function. The Quality Assurance Documents will identify those structures, systems, and major components to be covered by the Quality Assurance Program in order to provide continuing compliance with these standards throughout the operating life of the station. Additionally, it is the policy of NPPD that activities affecting quality shall be documented by approved instructions, procedures, or drawings and such activities shall be implemented as documented. Such documentation shall contain adequate qualitative and/or quantitative acceptance criteria to provide a measure of accomplishment.

It is the policy of Nebraska Public Power District (NPPD) to staff the Nuclear Power Group (NPG) with properly-trained personnel in all responsible positions and job assignments. Sufficient numbers of licensed and senior licensed operating personnel will be available to assure proper operation of the station under all reasonably foreseeable circumstances including personnel turnover, vacations, and disability.

All District personnel, as well as non-District personnel who work independently under NPPD's QA Program, responsible for operating, maintaining, or designing safety-related systems and equipment shall receive formal instruction in Quality Assurance, including:

basic principles of quality assurance, 10CFR50 Appendix B, the contents of this policy document, and Quality Assurance Documents, as applicable.

Trained technical, engineering, and Quality Assurance Ppersonnel shall be assigned surveillance and audit tasks to ensure compliance with the requirements of the documents which control station operation, such as the NRC license, Updated Safety Analysis Report, Technical Specifications, Operating Manual, QA Program for Operation, and other such controlling documents. During the time personnel are performing QA functions, they shall be responsible to the QA Division to maintain the organizational independence required by the QA Program.

It is the policy of Nebraska Public Power District to maintain quality standards for Cooper Nuclear Station which will ensure the high degree of reliability and safety needed to meet the overall objectives of supplying safe and dependable electric service to its customers.

The CNS QA Program for Plant Operations utilizes the guidance provided by NRC publications WASH-1283 (5-24-74), WASH-1284 (10-26-73), and WASH-1309 (5-10-74) ("rainbow" series) except where specific exceptions and clarifications are noted within this document. Where specific requirements included in the standards are in conflict with original design requirements set forth in the USAR and other appropriate design documents, the original design requirements shall govern. Later revisions to standards presently committed to by CNS, may be specifically invoked by the design requirements where deemed appropriate, consistent with the overall commitment to maintain the plant in an "equal to or better than original" condition.

In summary, NPPD is committed to the continuous development of a Quality Assurance Program which will meet the requirements of 10CFR50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants, and other applicable regulations as may be

promulgated by the Nuclear Regulatory Commission. This commitment applies to all NPPD organizations to assure that a high standard of quality will be maintained during nuclear plant operation. Section 2 of this document presents a summary discussion of the QA Program as applicable to the 18 criteria of 10CFR50, Appendix B.

1.3 Objectives

In accordance with the policy statements above, the overall objective of the CNS Quality Assurance Program for Operation, as defined in ~~Quality Assurance Instructions (QAIs),~~ Quality Assurance Plans (QAPs) and Nuclear Quality Procedures (NQPs), is to set forth the Quality Assurance organizational structure and personnel responsibilities and to set forth general requirements for the preparation of written procedures and controls necessary for quality surveillance and auditing to verify the following:

a) Regulatory criteria, codes and standards, and design bases for safety-related systems (as defined in the CNS QA Program) are incorporated into the test, operating, modifications, and maintenance procedures and instructions to meet all requirements for nuclear safety and station reliability;

b) Results of all preoperational and operational tests of safety-related systems and components conform to the requirements of the drawings, specifications, procedures, and instructions, and that appropriate reports are prepared to document that all results of tests meet prescribed acceptance criteria;

c) Nuclear Fuel is purchased, designed, manufactured, inspected, packaged, shipped, received, installed, and operated in the reactor in accordance with approved procedures, instructions, regulatory requirements, and license stipulations;

d) The Station is operated, maintained, tested, refueied, repaired, and modified, in accordance with approved procedures, instructions, regulatory requirements, and license stipulations, consistent with quality standards equal to or better than those in effect during design and construction;

e) A system is established and maintained to control, safeguard, and permit ready retrieval of quality- related documentation generated for materials and components during the design, fabrication, modification, maintenance, and operation of CNS;

f) Appropriate and complete reports, records, and logs are established and maintained so as to provide a continuing record of quality-related activities associated with station safety and reliability throughout the life of the station;

g) The NPG personnel are subjected to periodic training, retraining, requalification, and examination such as to maintain and improve their job skills which are essential to safe and reliable operation of the station;

h) Station security and nuclear fuel accountability and safeguards are maintained in accordance with approved procedures and instructions;

i) Corrective action ~~Nonconformance~~ documents/reports and associated resolutions are to be properly ~~resolved~~ controlled and filed in the appropriate quality-related record files;

j) Inspection reports issued by the NRC are properly resolved and documented;

k) Spent fuel shipment activities are to be accomplished in accordance with regulatory requirements (10CFR Part 71).

1.4 Scope

The QA Program for Operation applies to those nuclear station structures, systems, and components that are designed to prevent or mitigate the consequences of postulated accidents which could cause undue risk to the health and safety of the public, and to other selected systems and programs as defined in implementing QA Plans. The requirements of this program apply to all activities which affect the safety-related functions of those structures, systems, and components, including designing, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, in-service inspection, and modifying.

This program specifically applies to, but is not necessarily limited to the nuclear fuel, the reactor coolant system and its auxiliaries and controls, the reactor protection and engineered safety systems, the reactor containment system, portions of the radioactive waste disposal system, and other systems and components required for safe, efficient, and reliable operation of the plant. A tabulation of those structures, systems, and components which are covered by the QA Program is given in Table 1.

The Quality Assurance activities governing those structures, systems, and major components shall be performed as described in the Quality Assurance Plans (QAPs) (see Section 4.1.3).

The Quality Assurance Criteria in 10CFR50, Appendix B, are oriented primarily toward engineering, manufacturing, and construction activities. Therefore, it is necessary to define, by specific Quality Assurance Documents, the manner in which the NRC Quality Assurance Criteria are to be applied to the station operating activities. Such Quality Assurance Documents shall be prepared in accordance with the requirements specified in Sections 2.0 and 4.0 of this policy document.

The specifications, principles, and procedures which controlled the original procurement, fabrication, and construction have been carried over into the QA aspects of station operation to the greatest extent practicable. It is the intent of NPPD management to maintain, as a minimum, the quality level achieved in the original design and construction.

1.5 Definition of Terms

Key words and phrases used to characterize this QA Program are defined herein to establish a basis for uniform and consistent interpretation of the Quality Assurance requirements. Definitions of these terms are based upon documents and standards issued by the American National Standards Institute (ANSI), NRC Safety and Regulatory Guides, professional societies involved in standards work (ANS, ASME, IEEE, et al.), and on the basis of contemporary usage in the nuclear power industry; or shall be defined specifically to convey the intent of this particular program. Specific to the related ANSI Standard for this subject, the following commitment applies:

1. ANSI N45.2.10-1973 "Quality Assurance Terms and Definitions," and the associated Regulatory Guide 1.74, are applicable to the CNS Operational QA Program, with the following clarification:

   There may be instances where existing procedures contain definitions that may not be in strict accordance with those provided by this standard. As existing procedures are revised, however, such definitions shall be evaluated to assure that all definitions meet those provided by this standard.

To facilitate review and understanding of this policy document, the following basic terms are defined below along with appropriate QA Program requirements.

Assessment

A planned, methodical, and comprehensive examination of an event, program, process, activity, or function which may include, compliance with existing NPG documents and/or comparisons to existing industry information.

Audit

An activity to determine through investigation, the adequacy of, and adherence to, established procedures, instructions, specifications, codes, and standards or other applicable contractual and licensing requirements, and the effectiveness of implementation.

Class

For piping and valves, CLASS is determined by the applicable ASME Code. For seismic considerations, CLASS is determined by the USAR. (See also Essential, Non-Essential, and Quality Commercial Grade.)

Codes and Standards

Documents issued by qualified organizations which contain standardized requirements for particular equipment or applications (e.g., ASTM Material Standards, ASME Pressure Vessel Code, etc.).

(Refer also to ANSI N45.2.10 for definition of "Standard".)

Condition Report

Condition Report (CR) is the vehicle utilized for identifying and correcting conditions adverse to quality, and significant conditions adverse to quality as described in 10CFR50, Appendix B. Condition Reports also provide a method for identification and correction of those conditions not specifically described in 10CFR50, Appendix B.

Controlling Documents

All those drawings, specifications, procedures, instructions, manuals, data books, Updated Safety Analysis Reports (USAR), Technical Specifications, and the like, which have been approved and issued by the appropriate authorities, and which prescribe the conditions and limitations under which work is to be performed.
(Refer also to ANSI N45.2.10 for definition of "Documentation".)

Design Change

A design change (generic application) is considered to be any change to a component, equipment, or structure that changes the design criteria, configuration, or margin of safety for a system or component which could impact nuclear safety, equipment and system integrity, or personnel safety. For the purposes of definition, "design change" includes Design Changes, Equipment Specification Changes, etc.

Designated Representatives

An individual or organization that is authorized by the purchaser to perform a specific function as identified/described in the procurement document ~~process~~.

Emergency Procedures (Operating, Maintenance, or Repair)

Those activities which must be performed without delay in order to:

a) Avoid further degradation of off-normal conditions which, in themselves, do not constitute an accident, but which could lead to an accident if not corrected promptly;

b) Reduce the consequences of an accident or hazardous condition which has already occurred;

c) Implement an emergency plan;

d) Prepare for an anticipated act of nature.

Essential

For purposes of applying and implementing this Quality Assurance Program, the term "Essential" shall apply to the following:

a) All systems, structures, equipment, and components which are identified in the USAR as having been designed and built to Seismic Class I requirements;

b) All systems, structures, equipment, components, instruments, and controls which are identified in the USAR as being required to shut down the plant and maintain it in a safe shutdown condition;

c) All other systems, structures, equipment, components, instruments, and controls which are placed in the "Essential" category by NPPD.

Evaluation

An assessment of smaller scope; focusing on a portion of a process, a specific industry event/experience, or a specific CNS event/issue. Primary emphasis is compliance with existing CNS management expectations and goals, and secondarily for comparisons to existing industry events/standards.

Functional Organization Chart

A pictorial description of the organization as it actually works showing actual lines of direction, supervision, responsibility, authority, and communication. Such functional lines may or may not coincide with regular administrative channels.

Inspection

The determination that physical characteristics meet predetermined requirements by visual checks or by other techniques such as X-ray, ultrasonic or dye penetrant examination, etc. (See also Quality Control).

(Refer also to ANSI N45.2.10 for definition of "Inspection".)

Licensed Station

A nuclear station which is designed and constructed so as to meet requirements of applicable regulatory criteria and is thereby eligible to receive a construction permit and operating license from the U.S. Nuclear Regulatory Commission.

Lower Tier Procurement

Procurement by a supplier from a subsupplier of items or services.

Maintenance Procedures

Written instructions which define a preplanned maintenance program and prescribe the methods, materials, and processes to be used to assure continuing quality and continuing operation of equipment within required performance characteristics.

Major Maintenance, Repair, or Modification

Those maintenance, repair, or modification activities performed on nuclear safety-related structures, systems, or components which involve:

a) Special craft or procedure qualifications to meet Code, Standard, or Regulatory requirements;

b) Alterations which affect overall structural integrity, essential performance characteristics, or margins of safety in design for nuclear safety-related structures, systems, or components;

c) Any permanent change to the facility that requires a Technical Specification change or creation of an unreviewed safety question.

Minor Maintenance, Repair, or Modification

Those maintenance or repair activities which are within a journeyman craftsman's capability, and which:

a) Are prescribed in the equipment manufacturer's instruction books as necessary or desirable for most effective operation;

b) Are prescribed as part of a preplanned and approved routine or preventative maintenance program;

c) Any permanent change to the facility judged significant enough to warrant documentation that does not require a change in Technical Specification or present an unreviewed safety question.

Monitor

Periodically observe on a formal or informal basis whether work is being performed according to the requirements of the controlling documents (see also Surveillance).

Nonessential

Any structures, equipment, and components which may be important to reactor operation, but are not required for preventing an accident which would endanger the public health and safety, and are not required for the mitigation of the consequences of these accidents.

A Nonessential designated item shall not degrade the integrity of any item designated Essential.

Nuclear Quality Procedures (NQPs)

~~Procedures controlled by the~~ Nuclear Quality Assurance Division Procedures that contain requirements/guidance for QA Division activities which affect ~~the~~ activities of other divisions ~~of NPPD~~ within the NPG and the District. NQPs define the responsibilities for implementation of the QA Program in accordance with policies and practices herein defined as they apply to the QA Division. In addition, they provide guidance for surveillance, audit, and assessment/evaluation activities to be performed by the QA Staff.

Off-Normal Condition

A condition which results when an operating variable departs from its normal range. To restore normal operating conditions following such a perturbation, action is taken under off-normal procedures so as to correct the condition which, if not corrected, could degenerate into a condition requiring action under an emergency procedure.

Operating Procedures

Written instructions which define the normal method, means, and limits of operation, in all modes, of a nuclear power station, a system or systems within the station, or station processes.

Purchaser

The organization responsible for issuance or administration or both of procurement documents.

(Refer also to ANSI N45.2.10 for definition of "Purchaser".)

Quality Assurance

All those planned and systematic actions performed for the purpose of establishing a high level of confidence that:

a) Work performed on the project conforms with the requirements of the applicable codes, standards, license stipulations, safety analyses, design drawings, specifications, procedures, and instructions;

b) A structure, system, or component will perform satisfactorily in service; and

c) Appropriate records, documentation and/or drawings are maintained to show compliance with a) and b) above.

Quality Assurance Documents

Those documents inclusive of the QA Policy Document, Nuclear Quality Procedures, QA Plans, ~~QA Instructions,~~ Procedures (and associated data sheets), logs, etc., which have been approved for use, and whose intended function is to provide direction, verification, or documentation for activities affecting quality.

~~Quality Assurance Instructions~~

~~Quality Assurance Instructions define the responsibilities for implementation of the QA Program in accordance with policies and practices herein defined as they apply to the QA Division. In addition, they provide guidance for surveillance and audit activities to be performed by the QA Staff.~~

Quality Assurance Plans

Quality Assurance Plans are those documents specifically designed to provide detailed quality requirements for a given functional area. The plans are generated by applying the 18 criteria of 10CFR50, Appendix B, to each functional area and then deriving the specific quality requirements for that area.

Quality Assurance Records

Those records (see Reference 7.9) which have been completed and furnish documentary evidence of the quality of items and/or activities affecting quality.

A document becomes a Quality Assurance Record when the activity related to the document becomes part of the operating condition of the plant.

Quality Commercial Grade

Classification of a Commercial Grade Item (CGI) intended for safety-related use, procured from a Q.A. approved source and dedicated in accordance with approved station procedure ~~1.13~~; which meets the 10CFR21 definition of CGI.

Commercial Grade Item (CGI) - An item that meets all of the following criteria:

a) Not subject to design or specification requirements unique to nuclear facilities or activities;

b) Used in applications other than nuclear facilities or activities; and

c) Is ordered from the manufacturer's published product description, e.g. catalogue, as an off-the-shelf item.

Quality Control

Those activities which deal directly with the measurement, observation, or verification of physical characteristics of materials, components, or systems which provide a basis for controlling quality to within predetermined limits, or requirements, including adequate quantitative and/or qualitative acceptance criteria by which an activity can be measured.

Quality Requirements

Those factors which define limits which must be met so that the product will perform its intended function reliably throughout its design life. They include, but are not limited to, conditions important to proper material selection, manufacture, construction, and inspection; substantiation that material or parts conform to all specification requirements, testing to demonstrate adequacy of performance; protection of finished parts to prevent deterioration; and conditions for operation, maintenance, and repair which enable continuing operation within prescribed margins of safety and within prescribed performance limits.

Right of Access

The right of the purchaser or designated representative to enter the premises of a supplier for the purpose of inspection, surveillance, or quality assurance audits.

Regulatory Criteria

That body of NRC publications which define the conditions which must be met to obtain and hold an NRC Construction Permit, Operating License, and Licenses for individual operators.

Review

A deliberately critical examination. The term includes the routine monitoring of station operation performed by the Site Manager and his staff as a normal management function,

and the formal independent evaluations of certain contemplated actions and after-the-fact investigation of anomalies conducted by a duly constituted review and audit group.

Safeguard (of Nuclear Material)

Measure taken to prevent diversion of nuclear materials into unauthorized or illegal uses (see also Accountability).

Safety-Related

(See "Essential")

Services

The performance by a supplier of activities such as design, fabrication, inspection, nondestructive examination, repairs, installation, or training.

Significant Conditions Adverse To Quality

Any conditions that could affect safety-related structures, systems, or components ability to function within design requirements or adversely alter performance characteristics.

Station Permanent Record File

The file which is established for the purpose of accumulating and storing all documents and records pertaining to quality-related activities throughout the life of the nuclear plant.

Supplier Evaluation

Those activities which determine the effectiveness of implementation of the supplier's Quality Assurance Program. A variety of methods may be used to perform a supplier evaluation and are described in the NQPs.

Surveillance

Surveillance is the QA Audit function consisting of formal and informal observations to determine that work is being performed in accordance with the requirements of the controlling documents and drawings (see also Audit and Monitor). Surveillance activities shall be performed in accordance with requirements specified in NQPs~~,~~ and QAPs~~, and QAIs~~.

Surveillance Testing

Periodic testing of structures, components, and systems related to nuclear safety, for the purpose of verifying that such safety-related structures, components, and systems continue to function or are in a state of readiness to perform their safety functions.

Testing

The determination or verification of the capability of an item to meet specified requirements by subjecting the item to a set of physical, chemical, environmental, or operating conditions.

(Refer also to ANSI N45.2.10 for definition of "Testing".)

Traceability

The capability to identify a particular component or material and to discover its entire history, back through the written records of its material formulation (heat number), manufacture, inspection, installation, test, operation, maintenance, repair, and replacement.

Witness

Formal observation by a knowledgeable person of a particular, prescheduled event during manufacturing, inspection, installation, testing, operation, maintenance, or repair. The purpose of witnessing is to provide direct observation and evaluation of an event, independent of the group performing the particular operation.

2.0 SUMMARY DESCRIPTION

This section defines the NPPD commitment for compliance to 10CFR50, Appendix B, as applied to safety-related structures, systems, and components associated with Cooper Nuclear Station.

In addition to describing commitments to 10CFR50, Appendix B, this Section also identifies NPPD's commitment to selected ANSI Standards and their associated Regulatory Guides.

2.1 Organization

The President and Chief Executive Officer (C.E.O.) (Figure 1) represents the highest level of management responsible for establishment of Quality Assurance policies, goals, and objectives. The responsibility and authority for nuclear facility and General Office support activities (including QA) has been delegated to the ~~Nuclear Power Group Manager~~ Vice President - Nuclear through the Vice-President - ~~Power~~ Production. This authority includes the right to direct, enforce, and perform any action required to ensure all activities conducted at Cooper Nuclear Station are in compliance with 10CFR50, Appendix B. In addition, the personnel assigned to the Quality Assurance Division shall have complete independence to perform audits, surveillances, inspections, verifications, assessments, evaluations and shall be independent of those groups performing, designing, purchasing, fabricating, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, in-service inspecting, and modifying. Figure 1 of this document outlines the QA Division functional organization. Quality Assurance Personnel shall have sufficient authority and organizational freedom to:

(1) Identify quality problems;

(2) Initiate, recommend, or provide solutions for conditions adverse to quality; and,

(3) Verify implementation of solutions.

2.2 Quality Assurance Program

The program shall be implemented in accordance with written, approved Nuclear Quality Procedures and Quality Assurance Plans ~~and Instructions~~ developed by the Quality Assurance Division. The District's QA Program will comply with the Quality Assurance Guidelines contained in the Orange Book - WASH, 1284- 10-26-73. Design Control, Procurement Control, Quality Control, and Quality Assurance activities associated with plant modifications will similarly conform to the guidance provided within the Gray Book - WASH, 1283- Rev.-1 and the Green Book - WASH, 1309- 5-10-74. Procedures will be prepared for each important activity of station operation which will clearly define the work to be performed on a step-by-step basis and will identify, where appropriate, the results to be achieved. Mandatory QC Inspections or Tests will be performed on an independent basis to verify that specific work activities are being correctly completed ~~procedures are being followed~~ (correct results obtained) and will be incorporated into the work procedures directly or by attachment. QA Audit activities will verify that the Quality Control Program is implemented.

Specific to the related ANSI Standards for this criterion, the following commitments apply:

1. ANSI N18.1-1971 "Selection and Training of Nuclear Power Plant Personnel," shall provide direction for selecting and training of personnel for the Nuclear Power Group.

2. ANSI N18.7-1972 "American National Standard for Administrative Controls for Nuclear Power Plants," and the associated Regulatory Guide 1.33, apply to the CNS Operational QA Program with the same exceptions as those taken in other sections of this Policy Document to ANSI N45.2-~~1213~~.

3. ANSI N45.2-1977 "Quality Assurance Program Requirements for Nuclear Facilities," and associated Regulatory Guides 1.28 and 1.33, shall apply to the CNS Operational QA Program, with the following exceptions:

   ~~(a)~~ Where Section 11 "Inspection" identifies the reporting relationship between the inspector and the "immediate supervisors who are responsible for the work being inspected," the CNS QC Program only requires that the individual performing the verification function shall not perform or directly supervise the work being inspected.

Table 1 identifies the structures, systems, and major components associated with Cooper Nuclear Station covered by this program. Table 1 is not intended to be all inclusive. The Nuclear Operations, Nuclear Support and Nuclear Engineering and Construction Divisions, with the assistance of the QA Division, will identify essential structures, systems, and components to be included within the scope of the QA Program. The Quality Assurance Program is designed to provide control over all activities affecting quality of essential items to a degree consistent with their safety-related importance. These activities will be governed by approved plans and instructions and these documents shall be followed under controlled conditions. The Quality Assurance Plans ~~and Instructions~~ and the Nuclear Quality Procedures will be reviewed periodically to assure that the requirements of the program are being met and new requirements are being incorporated.

In addition to essential structures, systems, and components, applicable portions of this program shall be applied to selected nonessential structures, systems, and components important to station reliability and performance. Specific application will be identified in dedicated Quality Assurance Plans.

Special process controls, test equipment, tools, skills (training, if required) shall be used during the conduct of inspection, verification and checking activities to assure a high standard of quality and reliability has been obtained on safety-related items covered by the Quality Assurance Program. Test equipment and special tools will be calibrated against a specified secondary standard.

Experienced individuals (which may include personnel from other divisions of the Nuclear Power Group (NPG), and/or outside qualified individuals) may be requested to assist in performing audits and inspections of certain CNS quality-related activities at the direction of the Division Manager of Quality Assurance. During these assignments, these individuals will have sufficient organizational freedom to identify and recommend corrections for quality deficiencies noted.

The Nuclear Training Department, in addition to QA Staff personnel, provides QA indoctrination for NPG employees as described in nuclear training program descriptions. In addition, QA Staff members will attend a minimum of one training seminar/course per year sponsored by a qualified agency and/or school. Some courses provided by the District's Nuclear Training Department shall be considered applicable to meeting this requirement. Such determination shall be made by the Division Manager of Quality Assurance. For the purposes of meeting this requirement, activities such as attendance at national conventions, participation in owners group committee's activities, and other such related items may be considered equivalent to a seminar. Such instances shall be specifically approved by the Division Manager of Quality Assurance. Ongoing QA training for personnel with nuclear plant responsibilities will be provided. Training

activities will be audited periodically by the QA Staff to verify its scope and effectiveness.

2.3 Design Control

Implementing procedures outline the method for identifying, controlling, and implementing design changes within the Cooper Nuclear Station. The procedures provide the mechanism for correctly translating the design changes and regulatory requirements into specifications, drawings, procedures, and instructions. They also establish the method of reviews, interface requirements (with original design organization, if required), approvals, and the organizations delegated the authority to implement the design change.

Design control measures shall include the review for suitability of application of items that are essential to the safety-related function of the system involved. A necessary part of this review concerns the safety classification of items to be procured. In those instances where the normal methods of Section 2.7 cannot be applied and it is necessary to purchase "commercial-grade" off-the-shelf items for use in essential applications, verification will be performed to ensure that the part utilized is functionally acceptable for the essential application. This verification may include dedication upon receipt, analysis, or other definitive method.

All design changes initiated for Cooper Nuclear Station will be forwarded to the QA Division for review and independent evaluation. These reviews shall verify the compatibility of the design change with applicable codes, standards, and regulatory requirements. Items to consider include reactor physics, stress, thermal hydraulic and accident analyses, compatibility of materials, accessibility for in-service inspection, maintenance, repairs, and delineation of acceptance criteria for inspection and tests.

Final acceptance of the design change will require an independent verification or check of the design adequacy such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program.

Specific to the related ANSI Standards for this criterion, the following commitments apply:

1. ANSI N45.2.11-1974 "Quality Assurance Requirements for the Design of Nuclear Power Plants," and the associated Regulatory Guide 1.64, shall be applied to design activities involving safety-related modification work and the revision or development of plant design documents occurring during the operational phase of CNS. However, where codes, standards, or design requirements are referenced, or are incorporated into the standard by reference, which are in conflict with original design commitments as set forth in the Updated Safety Analysis Report (USAR), the USAR commitments shall govern. Later revisions of applicable codes and standards may be specifically invoked by the design requirements where deemed appropriate, consistent with the overall commitment to maintain the plant in an "equal to or better than" original condition.

2. ANSI N45.2.4-1972 "Installation, Inspection, and Testing Requirements for Instrumentation and Electric Equipment During the Construction of Nuclear Power Generating Stations," and its associated Regulatory Guide 1.30, shall be applicable to the CNS Operational QA Program for safety-related modification work, with the following exceptions/clarifications:

   (a) The definition of Class I and Class IE electrical equipment set forth by this standard does not conform to the equipment categories of CNS. Electrical items upon which the Operational QA Program is based are

included in Table 1 of this policy document and the CNS "Q" List. The scope and applicability of this standard shall necessarily be limited to these defined areas.

(b) Appropriate requirements for installation, inspection, and tests are defined in job specifications and work instructions developed as a part of the modification work package. It is not intended that separate procedures be established which specifically address the various areas of this standard. During the development of work packages, consideration will be given to the areas outlined in Section 2.3, as appropriate.

(c) The requirements for installation, inspections, verifications, and tests shall be included in the work instructions. In the development of these instructions, consideration will be given to the guidance provided by Sections 4.0, 5.0, and 6.0 of this standard, and appropriate requirements will be incorporated into the instructions. It is not intended that separate procedures be established to specifically address all of the areas referenced.

(d) Application of the guidance provided by the additional codes and standards listed in Appendix B will be considered to the extent that such codes and standards provide useful and practical guidance for the work being performed. Commitments to the guidance of N45.2.4 shall not include commitments to the guidance of referenced standards.

3. ANSI N45.2.5-1974 "Supplementary Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants," and its associated

Regulatory Guide 1.94, shall be applicable to the CNS Operational QA Program for safety-related modification work, with the following exceptions/clarifications:

NOTE

With respect to structural concrete, acceptability shall be documented in accordance with the District's Dedication Procedures , which will be verified by independent QA audit.

(a) Appropriate requirements for installation, inspection, and tests will be set forth by job specifications and work instructions developed as a part of the modification work package. It is not intended that separate procedures be established which specifically address the various areas of this standard. However, in the development of the work package, consideration will be given to the areas outlined in Section 2.2, as appropriate.

(b) The requirements of control and calibration of measuring and test equipment set forth by this standard shall be applied to all measuring and test equipment used by NPPD or their agents, test laboratories, and contractors. Such requirements, however, will not be imposed on commercial batch plant facilities. Instrumentation at commercial batch plant facilities will be evaluated by NPG construction management personnel, or their designated representative, to determine that sufficient accuracy can be obtained.

(c) For small quantities of concrete involved in modification work, all concrete must be purchased from commercial concrete batch plants. For these small quantities of concrete, it is unreasonable to expect commercial

facilities to shut down normal operations to provide certified aggregate, cement, admixtures, fly ash, water, etc. In this respect the qualification tests required by Table A for aggregate; cement, admixtures, fly ash, and pozzolans; water and ice will not be required. Appropriate evaluations will be made to determine that good quality and generally-acceptable materials are used. NPG construction management evaluation, coupled with slump tests, air entrainment tests, and concrete cylinder strengths, will provide adequate control and qualification of the concrete.

(d) Design mixes consistent with, or equivalent to, original requirements will be specified and the results of the cylinder tests will be evaluated by NPG construction management based on the acceptance criteria associated with the original design mix requirements.

(e) The inspection requirements of Section 4.2 will not generally be performed as the small quantities of concrete involved in modification work will no doubt be mixed using materials already in the batch plant bins. Control of storage of materials would not be practicable.

(f) If available, appropriate certifications shall be obtained from the concrete supplier which verify the adequacy of truck mixers per the requirements of ACI-304, ASTM C-94. Where certifications are not available, two concrete test cylinders representing the first and last one-third of truck mixer contents shall be taken for evaluation of the mixer truck, over and above the normal concrete cylinders taken to evaluate the in-place concrete. The concrete batch plant facility shall be inspected by NPG construction management and the CNS QA Staff to assure that reasonable controls are being exercised with reference to the inspection guidelines set forth by Section 4.3(1) and (2).

(g) Inspection of fills and earthwork will meet the general requirements set forth. The extent to which individual inspection requirements are met will depend upon the nature and scope of the work to be performed.

(h) Except for normal batch qualification tests (slump, air content, temperature, and compressive strength) and initial reinforcing steel certifications, the in-process tests required by Table B are generally applicable to the periodic control which must be exercised with reference to long-term construction type programs. The in-process test requirement of Table B are not considered applicable to short-term modification work as would be required by QA at CNS.

4. ANSI N45.2.8-1975 "Supplementary Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems for the Construction Phase of Nuclear Power Plants," shall be applicable to the CNS Operational QA Program for safety-related modification work, with the following clarification:

(a) Where specific design requirements included in this standard or referenced codes and standards are in conflict with original design requirements set forth in the USAR and other appropriate design documents, the original design requirements shall govern.

2.4 Procurement Document Control

Cooper Nuclear Station Procedures, Nuclear Engineering and Construction Department Procedures, Quality Assurance Plans ~~and Instructions~~, and Nuclear Quality Procedures are required to define the applicable requirements, design basis methods, and procedures for procurement of spare parts, materials, equipment, and services for essential nuclear

systems. These instructions and procedures shall also include provisions for assuring that the necessary quality requirements are incorporated directly into the procurement documents for essential spare parts, material, equipment, and services. These instructions and procedures shall also include provision for assuring that the necessary records are specified and provided to the District by the supplier.

The basic principles and practices included in these procedures are expected to be applicable to any purchasing activity necessary for operation of the station; however, additional special controls may be necessary for major modification or repair activities.

Procedures covering procurement provide for independent Quality Assurance review of essential and quality commercial grade purchasing documents; QA review and approval of suppliers; and QA Audit of contractor and supplier activities.

Revisions ~~Change Orders~~ issued to ~~on~~ any procurement document will be subjected to the same review and approval as the original order.

All procurement documents issued to suppliers of safety-related items or services require that the supplier implement a Quality Assurance Program that meets the intent of 10CFR50, Appendix B (with the exception of those suppliers performing all work at Cooper Nuclear Station or in the Columbus General Offices under the District's QA Program). The Quality Assurance Programs submitted by the suppliers will be evaluated by NPPD QA to ascertain that they meet the criteria established in 10CFR50, Appendix B. All safety-related suppliers shall appear on the applicable section of the NPPD Suppliers List.

To the maximum extent practicable, the as-built drawings and specifications for Cooper Nuclear Station will be used in procurement of spare parts, material, and replacement parts.

Where necessary, because of design modifications, or where it is necessary or desirable to upgrade quality in replacement parts or material, necessary modifications will be made to drawings and specifications to incorporate requirements for currently appropriate quality level. These modifications or upgrading of replacement parts will be accomplished in accordance with approved instructions, procedures, and drawings. These documents will be subject to required reviews before being implemented.

Specific to the ANSI Standard related to this criterion, the following commitment applies:

1. ANSI N45.2.13-1976 "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants," is applicable to the CNS Operational QA Program, with the following clarification:

   (a) It must be acknowledged that equipment and components purchased during the design and construction phase were not purchased on the basis of present-day standards, especially with reference to supplier approval and supplier Quality Assurance Programs. In this respect, replacement parts and spare parts for existing equipment are often limited to sole-source suppliers. Such replacement parts or spare parts are purchased to appropriate quality standards, verified by NPPD QA, to maintain an "equal to or better than" condition but it is not considered practicable to backfit the requirements of this standard to all such suppliers.

2.5 Instructions, Procedures, and Drawings

Quality Assurance activities and other activities which have nuclear safety significance will be prescribed by documented instructions, drawings, and procedures as appropriate and shall be accomplished in accordance with these instructions, procedures and

drawings. These instructions will be sufficiently detailed and explicit so that any supervisor, inspector, or auditor can, by observation, determine whether or not activities are being satisfactorily accomplished and documented. These documents shall include the qualitative and quantitative acceptance criteria necessary to assure satisfactory completion of the test procedure. Those acceptance criteria shall, where appropriate, require post installation testing prior to returning the component or system to service. Repair maintenance activities on essential systems are performed in accordance with the Maintenance Work Request process. The required documentation for special processes are forwarded to the CNS QA Staff for review along with special test procedures and special maintenance procedures.

Document Hierarchy shall be as follows:

Level I:
- License Basis Documents
  - Technical Specifications
  - Operating License
  - "Safety Analysis Report"
    - * Updated Safety Analysis Report
    - * NRC Correspondence (Commitments and SERs)
    - * Quality Assurance Policy Document

Level II:
- Design Specifications and Drawings

Level III:

- Procedures
  - Administrative Procedures
  - Operational Procedures
  - Work Procedures
  - Nuclear Power Group Directives
  - Nuclear Quality Procedures

Level IV:

- Policies and Guidelines
- ~~Nuclear Power Group Directives~~

2.6 Document Control

Administrative control procedures shall be established by the Nuclear Power Group (NPG) ~~Columbus General Office (CGO) and Cooper Nuclear Station (CNS)~~ to control the identification, indexing, filing, retention, retrieval, and distribution of quality-related records and documents. Control procedures shall be reviewed and approved by authorized personnel and are distributed to and used at the site of the activity. These procedures shall also ensure that changes to quality-related records and documents receive the same level of review and approval as the original document.

The overall objectives of NPPD document control are to:

a) Identify those records and documents which are used to control, maintain, modify, or document quality-related activities both at the CGO and at CNS.

b) Establish an index of quality-related records located at the CGO and at CNS to enable personnel involved in safety-related activities to determine the proper documents to be used in the activity.

c) Establish a filing system.

d) Establish periods of retention.

e) Establish measures to control distribution and revisions.

The CGO Manager of Office Systems Services, CNS station management, and the Quality Assurance Division will jointly establish lines of specific responsibility, interfaces, and document control procedures.

Specific to the ANSI Standard related to this criterion, the following commitment applies:

1. ANSI N45.2.9-1974 "Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants," and its associated Regulatory Guide 1.88 shall be applicable to the CNS Operational QA Program, with the following exception/clarification:

   (a) For those design, manufacturing, construction, and operating records generated prior to implementation of this standard, it is not our intent to backfit the detailed requirements of this standard to those records. All such records, however, have been initially designated for lifetime storage, until specific review dictates otherwise, and will be stored in the record

storage facility. Record indexes and filing systems shall be established to permit reasonable identification and retrieval. The records will be stored and preserved per the requirements of Section 6.0 of this standard.

2.7 Control of Purchased Material, Equipment, and Services

NPPD receiving inspection instructions provide for determining that all purchased materials, equipment, and services purchased directly or through a contractor, supplier, or subcontractor meet the requirements specified on the original procurement specifications, such as code, standards, specifications, dedication, material identification, etc. The completed receipt inspection report will become part of the purchase order package. Procurement documents shall be available at the receiving area to identify the receiving inspections required.

Nuclear Quality Procedures provide for evaluation of supplier's quality program to determine effectiveness and compliance to the applicable 10CFR50 criteria as part of the supplier selection process. These instructions shall describe the methods and techniques used to evaluate the supplier's Quality Assurance Program.

The QA Division shall re-evaluate the supplier's quality program at intervals consistent with the importance, complexity, and quantity of the item or services to effectively maintain control of quality. Procurement documentation will specify mandatory hold points for witnessing or inspection of purchased materials, equipment, or services, if required by NPPD.

Upon receipt at the station, material, parts, and equipment purchased and identified as "Essential" or "Quality Commercial Grade" will be placed in a segregated storage area until all inspections are complete and all required certifications and documentation is received.

Items in segregated areas will not be issued, by the Warehouse, without the written permission of the Site Manager or designee, and then only after proper arrangements have been made to assure that necessary steps will be taken to bring all aspects of the particular item into conformance with normal requirements prior to the system containing components in "Hold" status being considered operable.

Suppliers of essential equipment, if appropriate, shall be required to provide certified documentary evidence that the material supplied conforms to the purchase document requirements such as material test report, code required test and inspection, documentation, etc. A complete set of documentation required by the procurement document for all essential materials, equipment, and services will be filed at Cooper Nuclear Station.

2.8 Identification and Control of Parts, Materials, and Components

To the maximum extent practicable, activities carried out during operation of the Cooper Nuclear Station will comply with the requirements for identification and control of materials, parts, and components as set forth in the as-built drawings and specifications for the station. Where special measures are required to assure proper identification of materials, parts, and components, such requirements will be incorporated directly into the procurement documents for such parts and assemblies. Such identifications which may include heat numbers, serial numbers, or other means of identification of the item will be incorporated into the procurement documents to provide means of traceability. Material received at the station (which has not been properly identified) will be segregated and tagged to indicate a "Hold" status. Except as indicated in Section 2.7 above, such parts will not be issued or used prior to final acceptance. CNS procedures will incorporate requirements necessary to assure that the identification measures are properly carried out at the station, that unacceptable items will not be used in essential

systems, and that the components to be used in essential systems receive independent verification of component identity prior to installation.

2.9 Control of Special Processes

General maintenance procedures provide for performance of special processes by qualified personnel using qualified and approved procedures. Control procedures provide for QA review, inspection, documentation of activities, and for proper integration of ~~QA/~~QC Inspection. In most cases, the procedures will be prepared only when a specific process is required in the maintenance, repair, or modification of essential equipment at CNS. These procedures shall also require special processes, such as welding, heat treating, and NDE, to be controlled and performed by qualified personnel in accordance with qualified procedures.

Maintenance modification control methods and Station Operating procedures are reviewed by CNS QA personnel. This review includes verification that necessary codes, standards, quality requirements, and acceptance criteria are incorporated to control special processes within established limits.

2.10 Inspection

Quality Control inspections have been assigned in this policy document to the organization basically responsible for the performance of the activity. A Peer QC Program will be utilized in which QC inspections are normally performed by QC Inspectors who have been selected from within the Nuclear Power Group, and who are many times just as qualified to perform the work as they are to inspect the work. QC personnel will be qualified/certified, and will conduct the QC Program, in accordance with NPPD's commitment to ANSI N45.2.6. This conduct of the QC Program will be within the detail established in the CNS Operations Manual, Volume 12.

Quality Assurance Audits, Assessments/Evaluations, and Surveillance of activities such as maintenance, repair and modifications will include direct observation; whereas operating functions will be monitored indirectly by observation and examination of individual operating personnel and documentation at intervals consistent with the importance of the activity. Direct QA or QC inspection will also be conducted for activities such as refueling, radiochemistry, and environmental monitoring. Special inspections, such as those requiring qualification to ASNT-TC-1A, will be contracted to approved suppliers. If direct inspection is impossible, indirect control methods will be specified in the instructions to provide a method of monitoring process methods and equipment. The results of all inspections will be placed in permanent record storage.

Controlling documents pertaining to quality-related activities receive Station Operations Review Committee (SORC) approval to ensure incorporation of appropriate quality requirements. QA is a non-voting member of SORC.

Specific to the ANSI Standard related to this criterion, the following commitment applies:

1. ANSI N45.2.6-1978 "Qualifications of Inspection, Examination, and Testing Personnel for Nuclear Power Plants," and its associated Regulatory Guide 1.58 is applicable to the CNS Operational QA Program, with the following exceptions/clarifications:

   (a) It has always been the belief of NPPD that, in order to be effective, Quality Control must be built into the operation of the plant. With this in mind, Quality Control and test functions performed at CNS are incorporated directly into the station procedures. Inspection points are then performed and signed off by qualified personnel not directly performing or supervising the step(s) being inspected. Selection of QC candidates for certification is a function of Station Management.

Actual certification of QC inspectors is the responsibility of the QA Division.

(b) CNS does not have the in-house capability to perform nondestructive examinations in accordance with SNT-TC-1A. These services are currently contracted to an approved supplier. Any required nondestructive examinations will be performed by personnel who are qualified and certified per SNT-TC-1A.

2.11 Test Control

Each type of test program performed by the station operating group will be defined by written procedures and instructions. These test programs include the preoperational tests, start-up test instructions, operational testing and surveillance testing of structures, systems, and components to demonstrate their capability to perform satisfactorily as a part of an integrated system. Acceptance tests will be developed for structures, systems, and components to demonstrate their capability to perform satisfactorily following repairs or modification prior to returning to service. Test procedures will identify the inspector, test performer, date, and data recorder. Each type of acceptance test has individual test procedures which include Quality Control provisions, acceptance criteria, and check points for observation or checking of important aspects. These test procedure prerequisites will include the test instrumentation requirements and environmental conditions. All Special Test Procedures, Special ~~Maintenance~~ Procedures, and Station Operating Procedures are routinely reviewed by SORC, of which QA is a member.

Quality Assurance Audits, Assessments/Evaluations, and Surveillance activities will be performed by the Quality Assurance Staff members to assure that tests are being performed in accordance with the requirements of the procedures, that results are evaluated and compared to the specified acceptance criteria, and that tests are being

performed by appropriately trained personnel. In addition, test procedures shall specify test requirements and quantitative and qualitative acceptance criteria where appropriate.

2.12 Control of Measuring and Test Equipment

Procedures shall define the requirements of inspection, maintenance, repair and calibration of all tools, gauges, instruments, and other measuring and testing devices which are used in activities which affect quality of safety-related equipment.

Each permanent or temporary installed plant instrument performing an essential function has been identified and placed on a regularly-scheduled program of inspection, test, and recalibration. All test and measuring equipment required for calibration of the above equipment will also be placed on a regular program of inspection, test, and recalibration and will be appropriately tagged. Documented calibration records are reviewed, as required, to evaluate calibration performance and frequency, and changes are made as may be necessary.

A Quality Assurance Plan will prescribe the QA functions to be performed relative to the calibration program. Quality Control and Quality Assurance practices require independent checks of calibration activities. Quality Assurance Surveillance performed by the QA Staff members will verify that procedures are being properly followed; that adequate records of calibration and testing of measuring and test equipment are being generated, maintained, and that regularly scheduled adjustments are made to maintain necessary accuracy. For equipment used to calibrate process equipment, procedures will define action to be taken should regularly-scheduled calibration checks reveal an out of specification condition exists. When inspection, measuring, and test equipment are found to be out of calibration, an evaluation shall be made, and documented, of the validity of previous inspection or test results and of the acceptability of items previously inspected or tested. Should the evaluation determine that previous inspection or test results

obtained with the affected instrument are unacceptable, a Condition Report ~~Nonconformance Report (NCR)~~ will be issued. Reference and transfer standards, traceable to the National Institute of Standards and Technology (formerly NBS), will be maintained at CNS.

Scheduled and/or unannounced audits or surveillances by the Quality Assurance Staff, the Safety Review and Audit Board, or NPPD management will include review of the calibration program.

2.13 Handling, Storage, and Shipping

The procedures for procurement and control of essential spare parts, materials, replacement parts, and equipment include the requirements for the control, handling, cleaning, shipping, receiving, and storage of essential parts and material. Quality Assurance Plans and NQPs ~~Instructions~~ provide for surveillance and audit to assure that procedures are followed and that essential parts and materials are received, inspected, stored, and controlled in such a manner so as to prevent degradation.

Specific to the ANSI Standard relating to this criterion, the following commitment applies:

1. ANSI N45.2.2-1972 "Packaging, Shipping, Receiving, Storage, and Handling of Items for Nuclear Power Plants," and its associated Regulatory Guide 1.38 is applicable to the CNS Operational QA Program, with the following exceptions/clarifications:

   (a) NPPD's QA program is structured to identify safety-related equipment and provide for designation of packaging, shipping, receiving, storage, and handling requirements for purchased parts and materials. The

classifications of this standard cannot be applied directly to individual spare parts or subassemblies of the parent equipment. Due to difference in volume, complexity, inspectability, etc., the packaging, shipping, handling, and storage requirements of spare parts and subassemblies will necessarily be different from the requirements which may be imposed on the entire component or piece of parent equipment.

(b) The majority of items purchased for an operating plant consist of components, subassemblies, and individual spare parts which could be used in a multitude of different applications. Such items are purchased to the most stringent requirement for their intended use. The volume and characteristics of procurement during the operational phase differ significantly from those purchases made during the design and construction phase. Items requiring special storage protection will be identified on the purchasing documents. Items that must be stored outdoors (equivalent of Level D) and items that must be stored in covered but unheated conditions (equivalent of Level C) will be evaluated on an individual case basis. However, it is not considered practicable to preclassify individual parts by levels as required by Section 2.7 of this standard. Shipping and packaging requirements for such items will likewise be handled in the procurement documents, as appropriate.

(c) QA Audits, Assessments/Evaluations, and Surveillances are performed to verify that the requirements of N45.2.2 are met except as noted in (a) and (b) above.

2.14 Inspection, Test, and Operating Status

The NPPD status tagging procedure, already in use throughout the system, has been adapted for use in the Cooper Nuclear Station. Where practical, particular emphasis shall be placed on tagging to prevent unauthorized operation or adjustment which could endanger the safety of personnel, damage equipment, or invalidate the results of tests already performed. These tags shall indicate abnormal equipment test and inspection status and reference special instructions for equipment located throughout the Cooper Nuclear Station.

Tagging procedures, where necessary, will require that equipment be tagged and that the associated power supplies, starters, switches and controls on the main control panel are tagged as well, to warn against operation. In some cases, power supplies will be disconnected and tagged to prevent inadvertent operation. Tagging will be controlled by the Shift Supervisor by requiring that serially-numbered tags, obtained from the Control Room, be used for all tagging purposes. Records will be maintained in the Control Room to enable operators and Shift Supervisors to determine the status of the equipment tagged.

A Temporary Modifications Control Program will be maintained to provide a method for recording the installation and removal of jumpers, fuses, or wire terminal disconnections. This record will include the location, reason, name of person authorizing action, and name of person performing the installation.

Requirements for tagging are included in the applicable procedures. Status tagging will be verified by audit and surveillance.

2.15 Nonconforming Materials, Parts, or Components

Warehouse and maintenance procedures include requirements for the identification and tagging of nonconforming materials, parts, or components, (See Section 2.8).

~~The Nonconformance Reporting Program~~

~~This program shall be used by all persons performing operation, maintenance, modification, and quality related functions to record and report:~~

~~a) Deviations from approved procedures;~~

~~b) Nonconforming materials, parts, or components received from outside suppliers on essential purchase orders;~~

~~c) Nonconforming materials, parts, or components within the plant;~~

~~d) Nonconforming materials brought on site without following established receiving and inspection procedures;~~

~~e) Orders or recommendations to stop work;~~

~~f) Reportable occurrences;~~

~~g) Any other deficiency which violates the intent of the Quality Assurance Program and which could have a significant adverse effect on quality;~~

~~h) Deviations which could be reportable under 10CFR21.~~

~~A separate report shall be prepared for each nonconformance. The intent of this separate report requirement is to simplify follow up, corrective action, and record keeping. Deficiencies and/or deviations identified by QA Staff personnel shall be reported on a Quality Assurance finding form~~.

~~The Deficiency Report (DR) Program~~

~~This program shall also be used by all persons performing operation, maintenance, modification, and quality related functions to record and report occurrences requiring the performance of analyses and/or corrective action , but which do not meet the threshold of an NCR.~~

Nonconforming items will be controlled in such a way as to prevent their inadvertent use or installation. Such parts will be reinspected and reviewed for adequacy prior to returning them to the manufacturer, scrapping them, or arranging for them to be reworked to conform. Disposition of a nonconforming item will be determined by the responsible supervisor in conjunction with the QA Staff. Written reports of decisions to repair or rework essential items will be reviewed and approved in accordance with maintenance and/or design control procedures.

Any decision to reduce requirements to permit use of nonconforming parts, materials, or components in essential systems, will be documented per the Corrective Action Program, ~~as a nonconformance report~~ and will be subject to Station Operations Review Committee (SORC) review and approval. Appropriate design modification documentation will be completed, if required.

Approved Procedures will be utilized for repair and rework of essential parts and equipment. All such rework will be thoroughly documented, including Quality Control

and Quality Assurance Surveillance activities, to assure conformance with the requirements of the specifications, procedures, and other controlling documents.

Essential equipment classified as scrap will be identified and segregated in such a manner to prevent inadvertent use or installation in an essential system.

~~The CGO QA Department will issue a quarterly trend report to the Nuclear Power Group Manager which may identify adverse trends that require corrective action.~~

2.16 Corrective Action

Corrective Action Program (CAP)

The CAP for CNS shall provide the measures to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective materials and equipment, and nonconformances are promptly identified and corrected. Measures taken to disposition significant conditions adverse to quality shall include; immediate actions taken, the cause of the condition, action taken to preclude recurrence, and corrective actions. The identification of significant conditions adverse to quality shall be documented and reported to the appropriate levels of management.

The CAP shall be utilized, by all personnel performing operation, maintenance, modification, or other quality related functions/activities at CNS, to document and report such deficiencies/discrepancies as:

a) Deviations from approved procedures.

b) Nonconforming materials, parts, or components received from outside suppliers on essential purchase orders.

c) Nonconforming materials, parts, or components within the plant.

d) Nonconforming materials brought on site without following established receiving and inspection procedures.

e) Orders or recommendations to stop work.

f) Reportable occurrences.

g) Any other deficiency which violates the intent of the Quality Assurance Program and which could have a significant adverse effect on quality.

h) Deviations which could be reportable under 10CFR21.

NRC Regulations which require formal reporting to the NRC of failures, malfunctions, deficiencies, unusual operating experiences, and deviations which may have a significant effect on quality or safety will be reviewed and evaluated by the Station Operations Review Committee and, where appropriate, by the Safety Review and Audit Board. It will be the responsibility of the Nuclear Group personnel to identify and promptly correct all such deficiencies or malfunctions either by improved maintenance, repairs, replacements, or modification. In all cases, the objective and the corrective action will not only be to correct the existing defect or deficiency, but also to include measures to determine cause and prevent recurrence of similar failures. Quality Assurance activities will verify that corrective action is performed in accordance with approved written procedures and that the details of the corrective action are properly documented for the permanent station records.

A separate report shall be prepared for each nonconformance. The intent of this separate report requirement is to simplify follow-up, corrective action, ~~and~~ record keeping, and trending.

The QA Division shall issue a quarterly trend report to the Vice President - Nuclear, which may identify adverse trends that require corrective action.

~~A monthly status report of open NCR's shall be prepared and distributed to:~~

~~Vice President - Production~~

~~Nuclear Power Group Manager~~

~~SRAB Administrator~~

~~Site Manager~~

~~Division Manager – Nuclear Engineering and Construction~~

~~Division Manager – Quality Assurance~~

~~Division Manager – Nuclear Support~~

~~Plant Manager~~

~~Senior Manager – Site Support~~

~~CGO Quality Assurance Manager~~

~~CNS Regulatory Compliance Specialist~~

~~CNS Department Managers~~

Deficiencies and/or deviations identified by QA Staff personnel shall be reported per the guidance defined in Nuclear Quality Procedures and/or the CNS Corrective Action Program.

2.17 Quality Assurance Records

All activities having a significant effect on quality and safety will be thoroughly documented, and all such documentation will be incorporated into the record storage system. Procedures will require appropriate physical storage and personnel to maintain these files. Record identification, storage, retrieval, access, control, retention, and safeguarding of all quality-related records associated with CNS will be in accordance with approved procedures. Records to be maintained include all records accumulated during engineering and construction and those records generated during station operation, maintenance, and modification as defined in the CNS Technical Specifications. These records shall also include qualification of personnel, equipment, and procedures. Inspection and test records shall identify the inspector, data recorder, method of observation, results, acceptance, and all nonconformance reports issued to document noted deficiencies.

CNS and/or Columbus General Office personnel will be allowed to maintain active working files at their work stations. The time frame for submitting these records to record storage facilities will be determined by their respective administrative procedures.

Administrative procedures shall provide for methods for changing records that provide clear identification of the change and must be initialed and dated by the person making the change and by persons authorized to approve the changes.

The program will include Audits of record storage facilities to assure that the procedures and controls are properly implemented. The CGO Manager of Office Systems Services and CNS station management will prepare detailed procedures for receiving records into the facilities and for making decisions on removal and disposal of outdated or superseded records. Refer to Section 2.6 "Document Control" for the commitment to ANSI N45.2.9.

2.18 Audits

Scheduled and unscheduled audits will be performed to verify compliance to CNS QA Program requirements and to determine the effectiveness of the area audited. Quality Assurance Plans for each functional area of station operating activities have been or will be prepared. These QA Plans identify the nature and extent of Quality Assurance audit activities to be performed by QA Personnel or under the direction of management. Audit responsibilities are assigned to the Division Manager of Quality Assurance. Audits performed under this direction (working with the Safety Review and Audit Board (SRAB) as referenced in Section 3.5) will be conducted according to the QA Plans to verify compliance with the Quality Assurance Program. Audits shall be performed in accordance with written instructions or checklists and conducted by trained personnel not directly responsible for areas being audited. NPPD Management may request audits of specific activities of particular concern to them. However, all such internal audits will

be coordinated to avoid interference with the operating activities at the station. Upon completion of the audit, a formal report will be prepared and transmitted to the organization audited which will include an evaluation statement regarding the program's effectiveness. All audit findings identified will be documented and appropriate follow-up action will be taken to assure that corrective action has been implemented. Follow-up action, including reaudits to verify corrective action, shall be fully documented.

Specific to the ANSI Standards relating to this criterion, the following commitments apply:

1. ANSI N45.2.12-1977 "Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants," and its associated Regulatory Guide 1.144, is applicable to the CNS Operational QA Program, and to the Supplier Audit Program.

2. Section 4.0 of ANSI N18.7-1972 "Administrative Controls for Nuclear Power Plants," will be used as a guide for scheduling and conducting audits.

3. The frequency of audits will be in accordance with Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)".

2.19 Additional ANSI Standards

ANSI Standards applicable to the CNS QA Program for Operation, not directly related to the preceding sections, are discussed in this section:

1. ANSI N45.2.1-1973 "Cleaning of Fluid Systems and Associated Components During Construction Phase of Nuclear Power Plants," and its associated

Regulatory Guide 1.37, is applicable to the CNS Operational QA Program, with the following exceptions/clarifications:

(a) Cleaning requirements for almost all maintenance, repair, and modification work will be considered as a part of the overall job requirements. In this respect, detailed cleaning procedures will not generally be prepared as separate documents. Necessary requirements, consistent with the scope of the work, will be included as a part of the overall work instructions. System cleanness is controlled at CNS by the following methods:

(1) Parts and components are checked for cleanness during receipt inspection and stored in a manner that will ensure adequate levels of cleanness are being maintained.

(2) Work instruction will be reviewed by Quality Control to assure that adequate cleaning and access controls are incorporated into work instruction and associated safety-related activities.

(3) Parts and components are inspected for cleanness prior to installation in accordance with CNS maintenance procedures.

(4) Work areas are maintained at a cleanliness level appropriate to the maintenance or modification activity being performed.

(5) Quality Control, Supervisory, or Engineering Inspections before, during, and after safety-related maintenance or modification activities address system cleanness.

(6) Random QA Audit, Assessment/Evaluations, and Surveillance of safety-related maintenance or modification activities requires verification of part, component, and system cleanness.

(b) For cleanness classifications where the scope of plant modification work is such as to make application of the guidance provided by this standard practicable, the cleanness classifications and requirements thereof shall be evaluated and applied, as appropriate, as a part of the overall work requirements.

(c) For most modification or maintenance work, however, involving only small portions or individual components of larger systems, it is not considered practicable to conduct cleanness tests with ASTM E11-70 Series. Appropriate cleanness will be maintained during the work and preoperational flushing will be conducted, consistent with the scope of the work performed and the original design requirements. Controlling the parts and components and the work area has provided CNS with reasonable levels of assurance that system cleanness will be maintained. In addition to the above, the Water Chemistry Department routinely samples and tests for system cleanliness, corrosion, crud buildup, etc.

2. ANSI N45.2.3-1973 "Housekeeping During the Construction Phase of Nuclear Power Plants," and its associated Regulatory Guide 1.39, is applicable to the CNS Operational QA Program, with the following exceptions/clarifications:

(a) The plant has been divided in zones for fire protection and security purposes. The zone designated for cleanness in the ANSI Standard are primarily intended for control or work during construction of the plant. Therefore, the CNS facilities will not be classified by the zones

designated in the Standard general housekeeping rules. Limitations on eating, drinking, and smoking are already provided in existing CNS procedures. Where special cleanliness controls, tool, and material accountability are required for particular types of work, temporary clean areas will be designated and defined in the procedures and work packages for accomplishing the work.

(b) Fire protection and prevention will be provided in accordance with NPPD evaluation of the CNS fire protection system as required by NRC regulations.

(c) Station procedures have been reviewed to determine the need for particular cleanness, housekeeping, and control provisions. Where indicated, procedures have been revised to incorporate such provisions, using the guidance of ANSI N45.2.3.

3. ANSI N45.2.23-1978, "Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants". This standard is applicable to the Operational QA Program at CNS and to the Quality Assurance Division Training Program.

3.0 ORGANIZATION AND RESPONSIBILITIES

Nebraska Public Power District is solely responsible for the operation of the Cooper Nuclear Station and will fulfill the objectives set forth in the Quality Assurance Program for Operation through its own organization and by contract with qualified contractors and consultants.

3.1 General

The overall Quality Assurance Program for Operation shall be conducted in accordance with the three ~~divisions~~ levels of responsibility; ~~which provides for Quality Control, independent Quality Assurance Surveillance, and Quality Assurance Audits~~ Work Performance and Quality Control, Management/Supervision Oversight, Quality Assurance Audit/Surveillance and Assessments.

Table 2 defines the three levels of QA as they are to be implemented for station operation and also shows the comparison with similar principles which shall apply to nuclear fuel procurement and any future major engineering and construction activities for the Cooper Nuclear Station.

It is intended that clearly separate lines of responsibility be maintained between those responsible for the operation of Cooper Nuclear Station and those responsible for auditing to verify that all quality and licensing requirements are consistently being met.

QA responsibilities will vary depending upon the type of activity involved (See Section 4.1.3). Additional details on individual QA responsibilities are given in the paragraphs which follow, together with additional explanation of the interrelationships between the various supervisors and managers involved.

3.2 Nuclear Power Group Management

3.2.1 Vice President - Production

The Vice President - Production is the responsible executive officer for all CNS Quality Assurance-related activities. He may delegate responsibility to the ~~Nuclear Power Group Manager~~ Vice President - Nuclear as in 3.2.2. below.

3.2.2 ~~Nuclear Power Group Manager~~ Vice President - Nuclear

Responsibility includes the Quality Assurance requirements governing those structures, systems, and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. Pertinent activities include designing, purchasing, fabrication, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, in-service inspection and modifications that are associated with Cooper Nuclear Station.

The responsibility and authority over the Safety Review and Audit Board has been delegated to the ~~Nuclear Power Group Manager~~ Vice Presiden. - Nuclear. The ~~Nuclear Power Group Manager~~ Vice President - Nuclear reserves the authority to conduct, or order the auditing or monitoring of any operations activity, at any time, to ascertain the effectiveness of the overall QA Program and to determine that all aspects of the QA Program are being complied with.

3.2.3 Division Manager, Quality Assurance

The Division Manager of Quality Assurance, a member of the executive staff, reporting to the ~~Nuclear Power Group Manager~~ Vice President - Nuclear, shall have the responsibility and authority for administrating and maintaining a Quality Assurance

Program for Operation ~~which is~~ in accordance with 10CFR50, Appendix B. Inherent in this responsibility is the authority to accept or reject any or all work, materials or equipment associated with Cooper Nuclear Station and Columbus ~~C~~GO. The Division Manager of Quality Assurance shall direct the preparation of plans and ~~instructions~~ procedures for defining the Quality Assurance functions associated with Cooper Nuclear Station to ensure that such activities are conducted in accordance with the Operating License and appended Technical Specifications. He shall also approve all plans and ~~instructions~~ procedures for defining and auditing the safety-related activities within the Cooper Nuclear Station and General Office. The actual audit functions to be performed are defined more completely by the body of Nuclear Quality Procedures~~,~~ ~~Quality Assurance Instructions~~, and Quality Assurance Plans required by Section 4.0 of this policy document. He shall also have ~~direct~~ administrative responsibility for evaluating suppliers of nuclear safety-related equipment, materials, and spare parts and for auditing the QA/QC activities of such suppliers.

The Division Manager of Quality Assurance and Staff shall have the necessary organizational freedom and access within the Nuclear Power Group ~~Columbus CGO and Cooper Nuclear Station~~ to institute the necessary Quality Assurance requirements, identify problems, and pursue prompt corrective action. Figure 1 outlines the QA Division functional organization.

The Division Manager of Quality Assurance shall monitor the Quality Assurance activities to the extent necessary for assuring compliance with the program. He shall review the effectiveness of the Quality Assurance Program with the ~~Nuclear Power Group Manager~~ Vice President - Nuclear on a regular basis. In addition, the Division Manager of QA has a direct line of communication with the President and C.E.O. He shall serve as a member of the Safety Review and Audit Board and provide additional QA Personnel to participate in SRAB activities when requested.

NPPD Quality Assurance Staff, under the direction of the Division Manager of Quality Assurance, shall have the responsibility and authority for implementation and ongoing development of the Quality Assurance Program for Operations. In addition, it shall be the responsibility of the Quality Assurance Division to monitor the interface between the ~~Nuclear Operations and Nuclear Engineering and Construction Division~~ Nuclear Power Group Divisions to ensure that plant modification and repairs receive the proper design reviews and approvals.

Unless otherwise provided for in writing, the QA Operations Manager or the QA Assessment Manager (depending on their availability) shall function as the Division Manager of Quality Assurance in his absence.

As shown in Table 2, he shall have responsibility for accomplishment of third level QA Audits and shall obtain assistance and special expertise when necessary to complete such audits effectively.

3.2.4 Quality Assurance Operations Manager ~~– CNS~~

The ~~CNS~~ Quality Assurance Operations Manager, reporting to the Division Manager of Quality Assurance, shall have the responsibility and authority for implementing and maintaining the Quality Assurance Program for Operation ~~at CNS.~~ as described herein.

He shall ~~also~~ be responsible and have the authority to perform, direct, or coordinate QA Surveillance and Audit activities/programs within the Nuclear Power Group. ~~Cooper Nuclear Station. to~~ QA review of the design and engineering functions within the NPG, including configuration management shall be included in such programs. These activities/programs shall determine if conformance with the CNS QA Program for Operation ~~NPPD Quality Assurance Manual~~ and applicable federal regulations as defined in the QA Policy Document ~~NPPD QA Manual~~ are being maintained.

The ~~CNS~~ QA Operations Manager shall advise and assist ~~the~~ Senior Management ~~Site Manager~~ and ~~their~~ ~~his~~ staff in all matters which affect the quality of the station. Similarly, he shall advise and assist all station personnel in matters regarding Quality Assurance and Quality Control.

In addition, the QA Operations Manager shall ensure that training programs and instruction are provided for QA Operations personnel to enable them to effectively execute and monitor the Quality Assurance Program for Operation.

The ~~CNS~~ QA Operations Manager shall designate members of the ~~CNS~~ QA Operations Staff upon request to provide training and instruction programs to enable CNS personnel to effectively execute the District QA Program.

The ~~CNS~~ QA Operations Manager is also responsible for monitoring of open audit items and interface with NRC during inspections at CNS. In addition, he shall also be responsible to verify that solutions to safety-related problems have been implemented and to perform scheduled audits of those activities ~~listed in Section 4.1.3 on an announced basis.~~ as defined in Quality Assurance Plans. Additional specific duties shall be defined in the Nuclear Quality Procedures~~,~~ ~~Quality Assurance Instructions,~~ and Quality Assurance Plans, issued in accordance with Section 4.0 of this Policy Document.

The ~~CNS~~ QA Operations Manager or designee shall also serve as a non-voting member of the Station Operating Review Committee (SORC).

The ~~CNS~~ QA Operations Manager and Staff will observe operations, maintenance, in-service inspection, special processes, repair or modifications, and other safety-related activities covered by the Quality Assurance Program, and ~~to~~ recommend that work stop when such activity, in their opinion, does not comply with approved

controlling documents. The Site Manager or designee is responsible to act on that recommendation and actually stop work unless it is determined such stoppage would result in a violation of the Technical Specification or other approved documents governing station operation or whether there are overriding considerations of safety involved.

The ~~CNS~~ QA Operations Manager will provide for a coordination function for QC activities at CNS. This includes reviews of inspector certifications and performance and the establishment of a training program. The function will also provide the communication path for the resolution of QC Inspector concerns.

The Quality Assurance Operations Manager shall have the responsibility and authority for the controlling, administrating, distributing, and coordinating changes and revisions to the Quality Assurance Program for Operation, subject to the requirements of Section 4.0 of the Policy Document.

During absence of the ~~CNS~~ QA Operations Manager, an individual from his staff will be designated to act on his behalf and serve as the nonvoting member of SORC.

3.2.5 Quality Assurance Assessment Manager ~~–CGO~~

The ~~General Office~~ Quality Assurance Assessment Manager, reporting to the Division Manager of Quality Assurance, shall have the responsibility and authority for implementing and maintaining the Quality Assurance Program for Operation, ~~within the CGO.~~ as described herein.

This responsibility includes the authority for implementing and maintaining the QA Assessment/Evaluation Program and the program for evaluating suppliers for safety-related equipment, materials, spare parts, and services, and for auditing the QA/QC activities of such suppliers.

The QA Assessment Manager shall advise and assist Senior Management and their staff in all matters which affect the quality of the station. ~~The General Office Quality Assurance Manager shall have the responsibility and authority for the controlling, administrating, distributing, and coordinating changes and additions to the Quality Assurance Program for Operation, subject to the requirements of Section 4.0 of the Policy Document. The General Office Quality Assurance Staff shall support the CNS QA Staff in quality matters such as internal audits and outage coverage upon request, as agreed between the General Office Quality Assurance Manager and the CNS QA Manager.~~

~~The General Office~~ The QA Assessment Manager and Staff shall have the responsibility for providing guidance to ~~the CGO Nuclear Divisions~~ NPG personnel in all matters affecting quality. They shall also establish and implement the program for evaluating suppliers for safety-related equipment, materials, spare parts, and services. ~~They shall also be responsible to perform scheduled surveillances within the General Office and verify that corrective action has been implemented.~~

~~The CGO QA Manager shall establish a program for QA review of the design/engineering function in the CGO, including configuration management.~~

Additional duties are defined in the Nuclear Quality Procedures, and Quality Assurance ~~Instructions, and~~ Plans.

The ~~General Office~~ Quality Assurance Assessment Manager is responsible for interface, along with the Division Manager of QA, with NRC inspections conducted within ~~the~~ NPG ~~at the General Office~~.

In addition, ~~he~~ the QA Assessment Manager shall ~~also provide~~ ensure that ~~for~~ training programs and instruction are provided for ~~to enable General Office~~ QA Assessment and QA Supplier personnel to enable them to effectively execute and monitor the ~~District~~ Quality Assurance Program for Operation. ~~Unless otherwise provided for in writing, the General Office Quality Assurance Manager shall act for the Division Manager of Quality Assurance in his absence.~~

3.2.6 Quality Assurance Supervisors

The Quality Assurance Supervisors report to the applicable QA Manager and are responsible for the performance of work activities assigned. They are responsible to direct the performance of QA activities, and to identify any condition adverse to quality to the appropriate QA Manager. The QA Supervisors are responsible for the continued maintenance and upgrading of QA Program Documents.

3.2.7 Quality Assurance Staff

~~General Office~~ Quality Assurance Supplier Staff

The ~~General Office~~ Quality Assurance Supplier Staff, reporting to the QA Assessment Manager, shall be responsible to assist and advise the ~~General Office Quality Assurance~~ Assessment Manager in all matters which could affect ~~the~~ Quality Assurance activities within the NPG. ~~General Office~~. This includes advising and assisting ~~General Office~~ personnel in all matters regarding Quality Assurance, and verification that solutions to safety-related problems have been implemented. ~~and for the performance of audits and surveillances of work activities within the General Office on an announced or unannounced basis~~. The QA Supplier Staff shall support the CNS QA Staff in quality matters such as internal audits, surveillances,

assessments/evaluations and outage coverage upon request, as agreed between the QA Assessment Manager and the QA Operations Manager.

The ~~CGO~~ QA Assessment Manager has designated the ~~CGO~~ QA Supplier Supervisor and Staff the responsibility for the ongoing development and implementation of the supplier evaluation program; review of procurement specifications and associated drawings to determine if special requirements such as codes, standards, materials, tools, and inspections, etc., are properly included. ~~;and development and implementation of the QA engineering function.~~

CNS Quality Assurance Staff

The CNS Quality Assurance Staff shall be responsible to assist and advise the CNS Quality Assurance Supervisors in all matters affecting the quality of the station. These duties include: procedure preparation, ~~performing QA activities within the station, advise and assist~~ , advising and assisting ~~all station~~ NPG personnel in all matters regarding Quality Assurance and Quality Control, ~~verify~~ verification that solutions to safety-related problems have been implemented, performance of ~~perform audits and surveillances~~ QA activities (audits, assessments, evaluations, and surveillances) ~~of work activities~~ within ~~CNS~~ the NPG on an announced or unannounced basis, and development and implementation of the QA engineering function.

Additional duties shall be as defined in ~~the~~ Nuclear Quality Procedures~~,~~ and Quality Assurance Plans.~~, and Instructions~~ issued in accordance with Section 4.0 of this policy document.

Disagreements or differences of opinion on Quality Assurance matters are expected to be documented and resolved jointly by both the CNS and General Office Quality Assurance Staff and appropriate CNS or General Office supervisory personnel. Where

such resolution is not achieved within a reasonable period of time, unresolved differences shall be promptly reported to the appropriate Quality Assurance Manager for resolution jointly with the Division Manager of Quality Assurance and ~~the other respective~~ Senior Management personnel, as appropriate. ~~Division Managers, Site Manager or Plant Manager.~~

Secretary to the ~~Division Manager of QA~~ QA Operations Manager

The Secretary to the ~~Division Manager of QA~~ QA Operations Manager shall be responsible for administering and documenting the controlled QA program document distribution. Additional specific duties shall be as defined in the Nuclear Quality Procedures, ~~Quality Assurance Instructions~~, and Quality Assurance Plans issued in accordance with Section 4.0 of this policy document.

3.2.8 Division Manager - Nuclear Engineering and Construction

The Division Manager of Nuclear Engineering and Construction under the direction of the ~~Nuclear Power Group Manager~~ Vice President - Nuclear shall provide technical assistance for plant modification activities at Cooper Nuclear Station. Those Quality Assurance activities associated with such modifications will be conducted in accordance with the CNS Quality Assurance Program for Operations. These activities will be audited periodically by Quality Assurance Staff and quality-related problems shall be identified and reported to appropriate levels of management for resolution.

The Quality Assurance Staff will perform the necessary follow-up action to assure that corrective action is implemented in a timely manner.

3.2.9 Nuclear Fuel Manager

For those aspects of Fuel Management ~~QA~~ covered by the QA Program, the Nuclear Fuel Manager, under the direction of the Division Manager of Nuclear Engineering and Construction, shall be responsible to furnish technical assistance as required to the Plant Manager and the QA Staff. Such assistance shall not replace or supersede the formal audits.

3.2.10 Site Manager

The Site Manager and his staff, under the direction of the ~~Nuclear Power Group Manager~~ Vice President - Nuclear, shall be responsible and have the authority for assuring that Quality Assurance activities, as defined by this and other approved QA Program documents are complied with. Some of these responsibilities are delegated to CNS management personnel and include Quality Control and Inspection functions as defined in Table 2. The actual functions to be performed shall be defined in lower tier documents such as NQPs, QAPs, NPG Directives, etc.

3.2.11 Plant Manager

The Plant Manager, under the direction of the Site Manager, shall regularly review station engineering, operation, radiological, and maintenance activities for the purpose of keeping abreast of significant quality activities.

3.2.12 Senior Manager - Site Support

The Senior Manager - Site Support, under the direction of the Site Manager, shall regularly review station security, training, and warehousing activities for the purpose of keeping abreast of significant quality activities.

3.2.13 Senior Manager of Safety Assessment

The Senior Manager of Safety Assessment, under the direction of the Site Manager, shall provide the management focal point for Nuclear Safety at CNS. This includes responsibility for oversight activities related to Nuclear Safety at CNS.

3.2.14 Division Manager - Nuclear Support

The Division Manager of Nuclear Support, under the direction of the ~~Nuclear Power Group Manager~~ Vice President - Nuclear, shall be responsible and have the authority for assuring that activities under his control are conducted in accordance with this QA Program. This includes but is not limited to timely responses to QA Division Audit and Surveillance findings and implementation of appropriate corrective actions.

3.2.15 Columbus General Office (CGO) Department Managers

CGO Departmental Managers report to either the Division Manager - Nuclear Engineering and Construction or the Division Manager - Nuclear Support as described in the USAR and are responsible for implementation of QA Program objectives within their area of responsibility.

3.2.16 Cooper Nuclear Station (CNS) Department Managers

CNS departmental managers, either directly or indirectly, report to the Site ~~Plant~~ Manager as described in the CNS USAR and are responsible for implementation of QA Program objectives within their area of responsibility.

3.3 Cooper Nuclear Station Personnel

The operational duties and responsibilities of the Cooper Nuclear Station personnel are described in the CNS Procedures Manual, Reference 7.5. In addition, the Cooper

Nuclear Station personnel are assigned Quality Control and inspection functions. Station personnel, under the direction of the Site Manager and his staff, are responsible for assuring that the station is tested, operated, maintained, and modified in accordance with approved plans and procedures.

3.4 CGO Personnel

The duties and responsibilities of CGO personnel are described herein and in the appropriate implementing documents. These documents address the CGO responsibility for such items as design, procurement, modification, and licensing. Reporting through department and division managers described previously, theirs is the first-line responsibility for implementing this program in the CGO.

3.5 Safety Review and Audit Board

The Safety Review and Audit Board (SRAB) has been established to provide independent review and audit of designated activities. The board must: verify that operation of the plant is consistent with company policy and rules, approved operating procedures, and operating license provisions; review important proposed plant changes, tests, and procedures; verify that licensee events are promptly investigated and corrected in a manner which reduces the probability of recurrence of such events; and detect trends which may not be apparent to a day-to-day observer.

Specific duties and responsibilities of SRAB, including auditing, are identified in the ~~Reference 7.14,~~ CNS Radiological Technical Specifications (Reference 7.14), and in the SRAB Reference Manual.

3.6 Station Operations Review Committee

The Station Operations Review Committee (SORC) has been established to advise the Plant Manager in all matters regarding operational safety.

Specific duties and responsibilities of SORC are identified in Reference 7.14, CNS Radiological Technical Specifications.

3.7 Outside Suppliers, Contractors, Subcontractors, and Consultants

During the life of Cooper Nuclear Station, it will be occasionally necessary to obtain assistance from outside suppliers and contractors. At all times, these outside suppliers, contractors, and consultants will work under the direction of the NPPD organization having primary responsibility for the particular work being performed. In those instances in which outside suppliers or contractors merely furnish personnel to augment the normal station or CGO staff for particular activities, such outside contractor personnel shall be required to perform their work in accordance with the CNS Quality Assurance Documents and other appropriate CNS procedures and instructions. In those instances in which outside suppliers, contractors, and subcontractors are assigned primary responsibility for a particular activity, such outside contractor shall be required to maintain a Quality Assurance and Quality Control Program and organization appropriate to the work to be performed. All suppliers, contractors, and consultants performing work classified as essential shall be maintained on the appropriate section of the CNS Approved Suppliers List. Selection of outside suppliers or contractors shall require the active participation of the Quality Assurance Division in evaluating and approving their Quality Assurance Program and reviewing the procurement documents prior to awarding the contract.

In every instance in which outside contractors have responsibility for work at CNS on safety-related nuclear systems, they shall be contractually required to work to procedures approved by the District's Station Operations Review Committee. Recognized standards or existing proprietary procedures may be used, but they must be specifically invoked in writing and clearly identified as to their applicability to the CNS work.

In addition, any outside contractor performing work at Cooper Nuclear Station under their own quality assurance program shall be contractually required to prepare, prior to performing the work, a Project QA Plan specific to the work to be performed at the Station.

Contractors and consultants performing safety-related work under the District's Quality Assurance Program shall be contractually required to perform the work under District supervision and in accordance with the CNS Quality Assurance Program for Operation. District personnel responsible for such work shall assure that contractor/consultant personnel are qualified to do the work and have been provided formal instruction in quality assurance. Additi lly, any calibrated tools and equipment provided by the contractor shall be recalibrated at Cooper Nuclear Station or by a District approved source, prior to use.

If any portion of work on safety-related nuclear systems is to be subcontracted, the prime contractor shall impose the appropriate QA requirements on the subcontractor. NPPD QA shall have direct access to and communication with the contractor's personnel at all levels, both at their home office and in the field.

Prior to performing work at Cooper Nuclear Station which affects safety-related equipment, outside suppliers, contractors, consultants, and selected representatives from the NPPD Nuclear Operation and Nuclear Engineering and Construction

Divisions shall jointly develop and enforce written agreements and/or procedures which clearly define the limits of the work; interface between contractor and station personnel; status and custody tagging procedures; contractor personnel dosimetry; and any other aspects which bear on station or personnel security and safety. Such agreements shall be reviewed by the Quality Assurance Division to ensure compliance with applicable Quality Assurance Program requirements.

At all times when outside suppliers, contractors, and consultants are obtained to assist in the execution of this QA program, the responsibility for effectiveness of these support organizations activities will remain with NPPD.

4.0 QUALITY ASSURANCE DOCUMENTS

The CNS Quality Assurance Program is defined by written policies, procedures, and plans ~~and instructions~~ which shall be implemented throughout the operating life of the station.

4.1 NPPD Internal Documents

Work procedures are based on the requirements of the Quality Assurance Program. Preparation and maintenance of basic work procedures is performed by engineering and operating groups, separately from the Nuclear Quality Procedures~~,~~ and QA Plans~~, and Instructions~~. Mandatory ~~QA/~~QC checkpoints shall be incorporated directly in or attached to, the work procedures to facilitate coordination between the specific work activity and the Quality Control function. It is not the intent to include the preparation of basic work procedures under the responsibility of QA, nor is it the intent to incorporate basic work procedures into the QA Program Documents. Work procedures, however, shall be reviewed by Quality Assurance for proper implementation of the QA Program objectives.

The format and content of NQPs and QAPs~~, and QAIs~~ shall be as specified by a Quality Assurance ~~Instruction~~ Procedure. Significant changes shall be reviewed and approved by the same levels of management as for the original document. Each change, when approved and issued, shall be distributed through a controlled distribution system.

Particular circumstances may occur while some work is in progress, which necessitates a change to an approved work procedure. When such circumstances arise, the changes

must be authorized per procedure. The written record shall clearly show the nature and extent of the change and the reason for requiring such change.

4.1.1 Quality Control Inspection

The Quality Control Inspection function shall be performed by individual(s) other than those who are actually performing the step(s) being inspected or who are providing direct, hands-on, at-the-job supervision. The Cooper Nuclear Station management, as part of their normal management function, are responsible for implementation ~~preparation~~ of the Quality Control requirements of the Peer QC program; however, the ~~CNS~~ QA Operations Manager is responsible to review and accept control methods prior to implementation.

~~The~~ Quality Assurance ~~Manager~~ Management, working with NPG Management, shall verify that adequate Quality Control inspections are incorporated directly in, or attached to, the work procedures and shall periodically inspect work performance to assure that the procedures containing Quality Control inspections are being followed. The QC Program shall identify the specific work which is to be subjected to inspection or verification and shall provide in detail the elements of work to be inspected which include:

1. Identity of the inspector or data recorder.

2. Type of inspection or verification.

3. Results (data to be recorded).

4. Acceptance (qualitative or quantitative) criteria.

5. Method of disposition of unsatisfactory inspection results.

6. Reporting requirements.

In addition, clear instructions shall be given regarding the timing, frequency or scheduling, and notification requirements for such inspections so as to obtain maximum effectiveness and to minimize delays in completion of the work.

It must be recognized that certain work, particularly in nonroutine maintenance or repair, cannot be anticipated. Therefore, procedures and Quality Control Inspection requirements cannot be prepared until a particular problem has been detected and evaluated.

Routine maintenance and repair of essential systems and components generally requires performance of a complete or partial Surveillance Procedure prior to placing the system back in service. This type of QC (actual performance or functional testing) following completion of work is considered a unique advantage on an operating facility. Such surveillance testing may be performed by the individuals who performed the maintenance activity. Records of the surveillance will be reviewed by the system engineer or other supervisory/management personnel.

4.1.2 Nuclear Quality Procedures (NQP)

The Quality Assurance staff shall prepare NQPs approved by the Division Manager of Quality Assurance and the ~~Nuclear Power Group Manager~~ Vice President - Nuclear. As described in Section 1.5 of this document, NQPs define Quality Assurance

activities and responsibilities which cross divisional boundaries. When approved, NQPs become a part of the CNS Quality Assurance Program for Operation.

~~4.1.3 Quality Assurance Instructions (QAI)~~

~~The Quality Assurance Staff shall prepare QAIs approved by the Division Manager of Quality Assurance. As previously described in Section 1.5 of this document, QAIs define QA division work activities which do not cross divisional boundaries. When approved, QAIs shall become a part of the CNS Quality Assurance Program for Operation.~~

4.1.3 Quality Assurance Plans (QAP)

~~Concurrent with the preparation of work procedures, and during operations or maintenance activities,~~ QAPs shall be developed which encompass those functional areas described within, defining the scope of the QA program. Quality Assurance Staff shall develop QAPs as needed. As described in Section 1.5 of this document, these QA Plans ~~will~~ outline specific Quality Assurance activities and shall become a part of the CNS Quality Assurance Program for Operation. Distribution of these Plans will be to those individuals who are responsible for that particular activity. ~~A QAP shall be developed for each functional area defining the scope of the QA program.~~

The format and content of QAPs shall be specified in a ~~QAI~~ NQP to provide uniformity and to assure that each plan is complete and adequate for the intended purpose.

The QAPs shall be prepared by the Quality Assurance Staff and shall be reviewed and approved by the Division Manager of Quality Assurance. In addition, when significant

changes have been made to these documents, the QAP will be routed to affected Senior Management personnel ~~the following~~ for review and comment~~:~~.

~~Nuclear Power Group Manager~~

~~Site Manager~~

~~Plant Manager~~

~~Senior Manager of Site Support~~

~~Division Manager - Nuclear Engineering and Construction~~

~~Division Manager - Nuclear Support~~

The QAPs shall define the specific work which is to be subjected to Quality Assurance review, surveillance, and audit, and the manner in which such review, surveillance, and audit is to be implemented.

Checklists shall be prepared ~~as described by QAIs after reviewing the work procedures describing the~~ per the guidance provided in Nuclear Quality Procedures, defining the scope of QA Surveillance or QA Audit activities ~~guidelines~~.

a) Quality Assurance Surveillance

The Quality Assurance Surveillance function is intended to provide an independent verification, on a continuing basis, that work is being performed in accordance with the requirements of the controlling documents. Such surveillances may be performance-based or compliance oriented depending on the

nature of the function being evaluated. The Quality Assurance Surveillance activities are not intended to duplicate QC Inspection activities, however, duplication may occur, in the effort to satisfy both Quality Assurance Surveillance and Quality Control requirements.

The objectives of Quality Assurance Surveillance are to verify that the Quality Control Inspection Program is being effectively implemented; that personnel performing Quality functions are properly qualified; that adequate information is recorded to provide a complete and accurate quality history; and that deficiencies are identified, corrected, recorded, and corrective action is taken to prevent recurrence.

This philosophy shall be taken into account in developing the checklists as guidance for the conduct of Quality Assurance Surveillance activities. QA Surveillance shall be as prescribed in NQPs and, QAPs~~, and QAIs~~.

The QA checklists shall identify the area of work to be subjected to surveillance and shall provide necessary instructions. The timing, frequency, or schedule for the surveillance shall be coordinated with the work being evaluated to ensure maximum effectiveness with minimum impact on the progress of the work.

b) Quality Assurance Audits

A comprehensive system of planned and periodic audits shall be implemented to verify compliance with all aspects of the Quality Assurance Program and to determine the effectiveness of the program. The audits shall be performed in accordance with written procedures or checklists by appropriately trained personnel not having direct responsibilities for the work being audited. Depending on the nature of the function being audited, the audits are conducted

in a performance-based manner to the maximum extent practical. The audits are supplemented by performance-based and compliance oriented surveillances, the results of which become part of the final audit package. The ~~General Office~~ Quality Assurance Assessment Manager and ~~CNS~~ Quality Assurance Operations Manager shall have the responsibility and authority for planning and executing Quality Assurance Audits identified by approved QAPs. However, the SRAB, or any manager or executive in the chain of organization above the Site Manager, or above the Quality Assurance Supervisors and Managers may initiate and carry out special Quality Assurance Audits within the guidelines provided by this Quality Assurance Program. Audit results shall be reported in writing to the NPG Management in accordance with the requirements of ~~QAI-5~~ NQPs and the results shall be reviewed with the Management responsible for the area of activity audited. Appropriate follow-up action shall be taken and documented as directed by the appropriate Quality Assurance Manager or Supervisor.

Internal instructions and guidelines include descriptions and timing of types of audits to be performed; information for initiating and performing audits~~,~~; and information for preparing audit reports.

Each QAP will be implemented through the use of the appropriate checklist. On the basis that some Quality Assurance Audits are to be conducted or directed by management, it is essential to maintain a high degree of flexibility in the manner of conducting an audit. It is intended that the QAPs provide audit guidelines to assure that areas to be audited are sufficiently defined in advance and that audit personnel are adequately prepared to make a meaningful audit with a minimum of interference with the progress of the work. Also, flexibility is required to permit the auditor to adapt his procedures to the conditions existing at the time the audit is made.

5.0 METHOD OF IMPLEMENTATION

The CNS QA Program for Plant Operations will utilize the guidance provided by NRC publications WASH-1283 (5-24-74), WASH-1284 (10-26-73), and WASH-1309 (5-10-74) ("rainbow" series) except as noted in the "Specific Exceptions" of this section.

The existing operational QA Program does not address all of the detailed requirements set forth in the "rainbow books." A detailed review has been made to determine where the CNS QA Program differs from the ANSI Standards cited in the "rainbow books."

With respect to the applicability of the "rainbow books" and the associated standards, it is impracticable to apply all of the requirements set forth by these documents to a plant for which important, and (in some respects) irreversible commitments, were made at the start of commercial operation (1974). It is also impracticable to apply requirements to an operating plant which were intended solely for the design and construction phase. In the event that construction activities are undertaken, the District will commit to compliance with the applicable portions of the WASH Series ANSI Standards. It is NPPD's intent to apply quality standards to maintenance, repair, and modification activities which will provide results which are equal to or better than the original construction.

The detailed methods of implementation shall be as provided for in written and approved procedures ~~NQPs, QAIs, and QAPs~~ prepared in accordance with Section 4.0.

The Quality Assurance Managers or designees shall review and comment on the NPG procedures to ascertain that necessary quality requirements are included. Procedure changes will be incorporated as necessary to correct identified control deficiencies or

needs. Differences of opinion on QA comments shall be resolved as indicated in Section 3.2.6.

After review of the various NPG procedures and manuals, the Quality Assurance Managers shall review the appropriate NQPs, ~~QAIs,~~ and QAPs for the purpose of assuring that the overall QA Program objectives continue to be accomplished in each segment of the work to which this QA Program applies.

Quality Assurance activities shall be coordinated with the SRAB and SORC. QA activities shall be conducted in a manner and on a schedule to assure organization, supervision, communications, and technical and administrative practices clearly provide for smooth, orderly, controlled, and safe execution of all safety-related functions.

Written reports of all QA activities, including descriptions of deficiencies and resolution thereof, shall be incorporated into the official QA file. Corrective action on deficiencies shall include resolution of the specific deficiency and verification that corrective action has been implemented to prevent occurrence of similar deficiencies in the future. A report of QA Audits performed (internal and external) shall be submitted to the Vice President - ~~Production~~ Nuclear by the Division Manager of Quality Assurance annually.

The Quality Assurance Staff shall maintain an up-to-date summary of the CNS Quality Assurance Policies, Procedures, ~~Instructions,~~ and Plans, showing how this QA Program for Operation implements the NRC guidelines contained in 10CFR50, Appendix B.

6.0 RECORDS RETENTION AND DISPOSITION

Instructions have been prepared by the responsible organizations to provide guidelines for CNS and CGO record retention and disposition in accordance with this policy document and applicable regulatory criteria. As a minimum, these procedures cover the following:

a) Records content and location;

b) Principal location from which records are to be controlled;

c) Complete records inventory and master index;

d) Conditions of storage, access, and security;

e) System of records identification, retrieval, and control;

f) System of records transfer and disposal.

Quality Assurance records (reference 7.9) will be entered into the controlled records system ~~after they have been dedicated. This dedication occurs when the activity to the document becomes part of the operating condition of the plant.~~ per the requirements of station procedure and ANSI N45.2.9 - 1974.

7.0 REFERENCES

The following documents were used in the preparation of the Quality Assurance Program for Operation of the Cooper Nuclear Station. It is intended that these documents be used on a continuing basis in the performance of Quality Assurance activities for station operation since they offer measurement criteria against which the QA Program can be evaluated.

7.1 Quality Assurance Criteria for Nuclear Power Plants 10CFR50, Appendix B (USNRC).

7.2 Standard of Administrative Controls for Nuclear Power Plants, American National Standard ANSI 18.7 - 1972.

7.3 Updated Safety Analysis Report, Cooper Nuclear Station, Nebraska Public Power District (NRC Docket 50-298).

7.4 Environmental Report--Operating License Stage, Cooper Nuclear Station, Nebraska Public Power District (NRC Docket 50-298).

7.5 Cooper Nuclear Station Procedures Manual.

7.6 Safety Rules, Nebraska Public Power District.

7.7 Safety Guides for Water-Cooled Nuclear Power Plants (USNRC), as appropriate.

7.8 Quality Assurance Requirements for Nuclear Power Plants ANSI N45.2 - 1977.

7.9 Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants ANSI N45.2.9 - 1974.

7.10 Quality Assurance Terms and Definitions ANSI N45.2.10 - 1973.

7.11 Quality Assurance Requirements for the Design of Nuclear Power Plants ANSI N45.2.11 - 1974.

7.12 Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants ANSI N45.2.12 - 1977.

7.13 Supplementary Quality Assurance Requirements for Control of Procurement of Equipment, Materials, and Services for Nuclear Power Plants ANSI N45.2.13 - 1976.

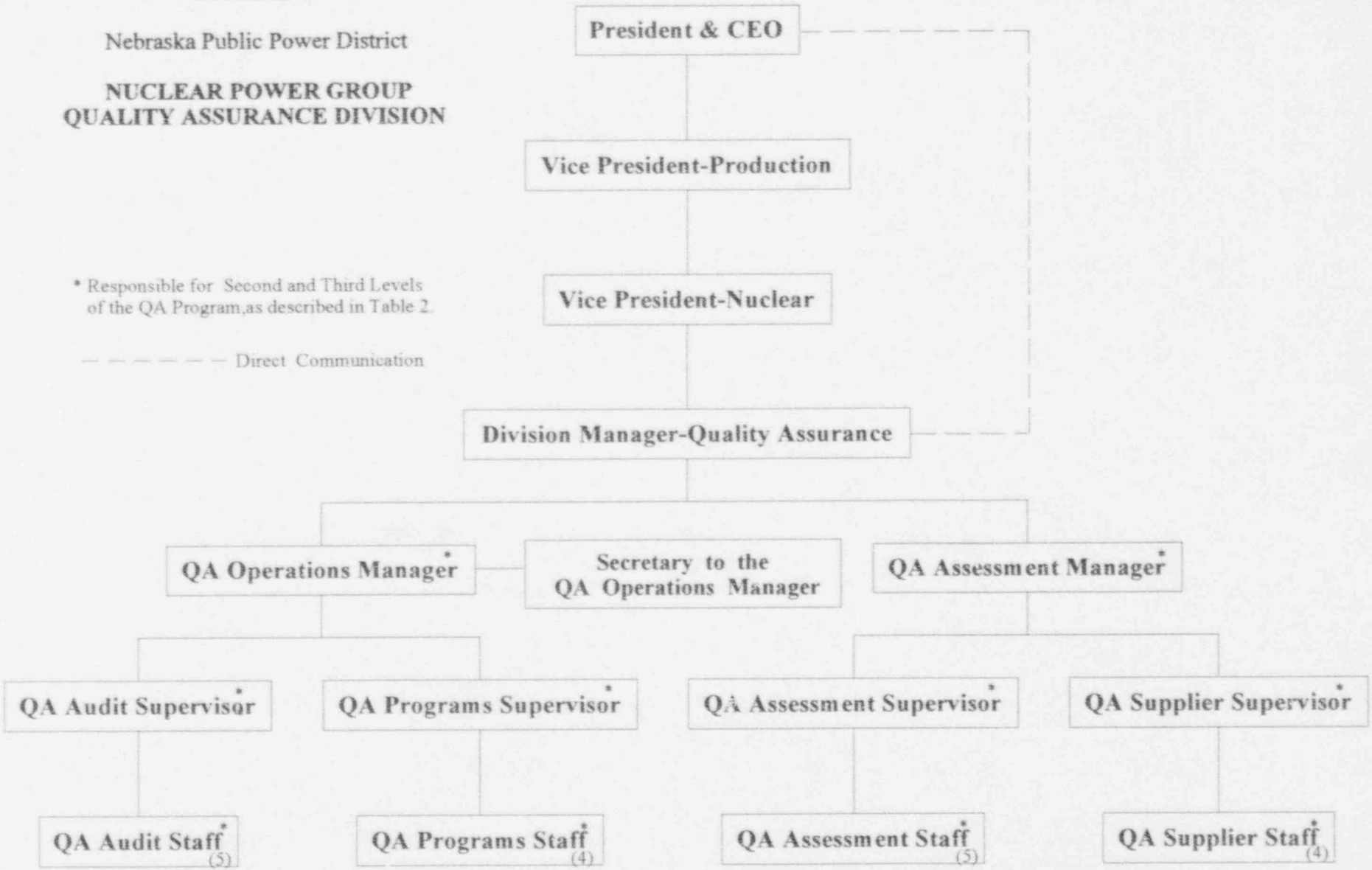
7.14 CNS Radiological Technical Specifications.

7.15 ANSI N45.2.23-1978 "Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants"

FIGURE 1

Nebraska Public Power District

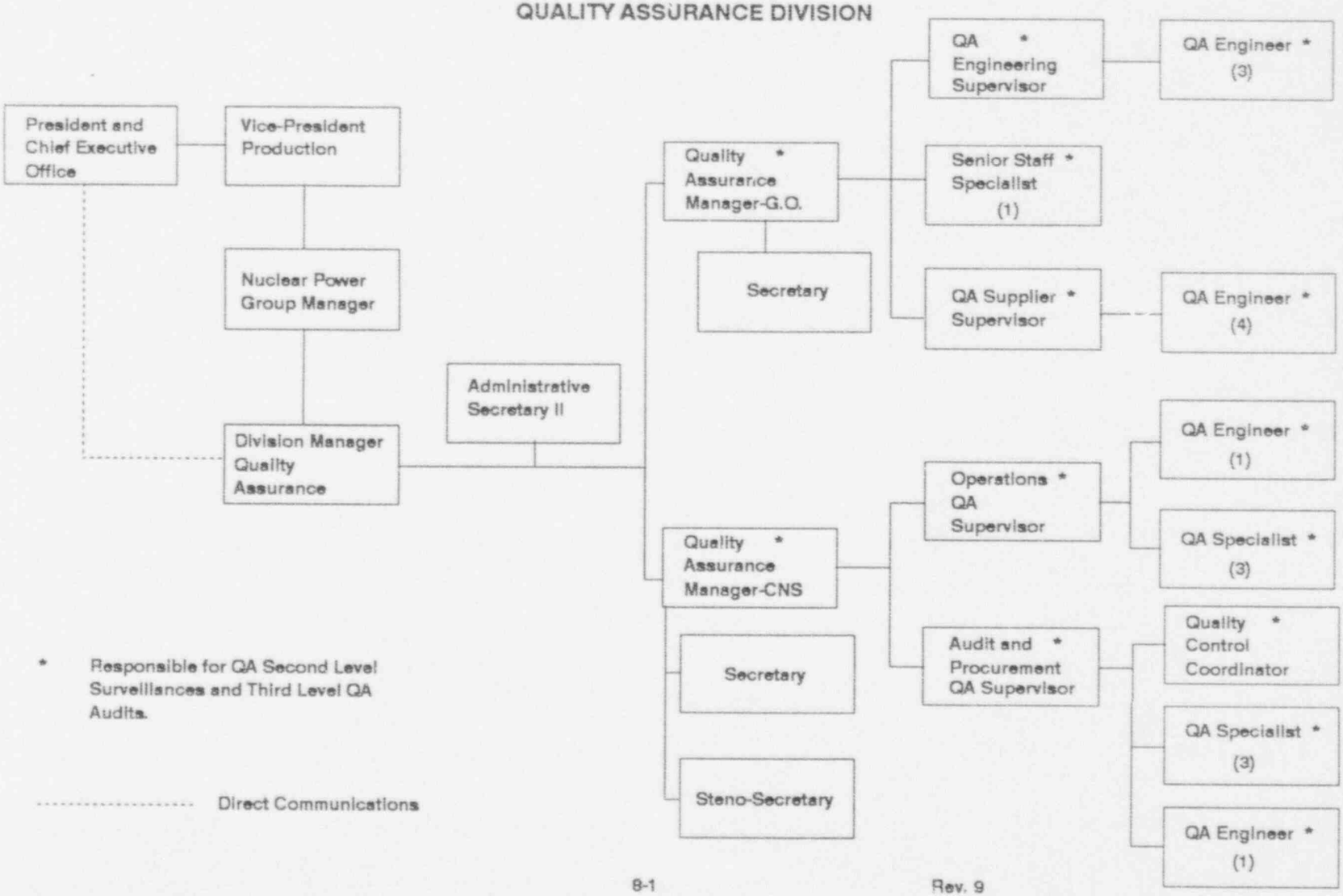
NUCLEAR POWER GROUP
QUALITY ASSURANCE DIVISION



* Responsible for Second and Third Levels of the QA Program,as described in Table 2.

— — — — — — Direct Communication

FIGURE 1
Nebraska Public Power District
NUCLEAR POWER GROUP
QUALITY ASSURANCE DIVISION



* Responsible for QA Second Level Surveillances and Third Level QA Audits.

---------- Direct Communications

TABLE 1

SYSTEMS AND ~~MAJOR~~ COMPONENTS WITHIN THE SCOPE OF ~~COVERED BY~~ THE QUALITY ASSURANCE PROGRAM

I. NUCLEAR STEAM SUPPLY SYSTEM

A. Reactor Primary Vessel

B. Reactor Primary Vessel Supports

C. Control Rods and Drive System Equipment Necessary for Scram Operation

D. Control Rod Drive Housing

E. Fuel Assemblies

F. Core Shroud

G. Steam Dryer

H. Steam Separator

II. REACTOR COOLANT SYSTEMS

A. ADS - Automatic Depressurization System

B. HPCI - High Pressure Coolant Injection System

C. LPCI - Low Pressure Coolant Injection System

D. CS - Core Spray System

E. RCIC - Reactor Core Isolation Cooling

III. REACTOR PROTECTION AND ENGINEERED SAFEGUARD SYSTEMS

A. Reactor Protection System

~~B. Rod Sequence Control System~~

B.~~C.~~ Standby Liquid Control

C.~~D.~~ Standby Gas Treatment

D.~~E.~~ Diesel Generators

Table 1 (Cont'd.)

~~E.~~F. Electrical Aux Power

1. Critical 4160 V Equipment
2. Critical 480 V Equipment

~~F.~~G. Neutron Monitoring Systems

1. APRM - Average Power Range Monitor
2. IRM - Intermediate Range Monitor
3. LPRM - Low Power Range Monitor
4. RBM - Rod Block Monitor
5. SRM - Source Range Monitor
6. TIP - Traversing In Core Probe

~~G.~~H. DC Power Supply

~~H.~~I. Nuclear System Leak Detection

~~I.~~J. Containment Isolation System

~~J.~~K. Nuclear Boiler and Related Instrumentation

~~K.~~L. Primary Containment

~~L.~~M. Rod Position Indicator

IV. NUCLEAR FUEL SYSTEMS

A. Refueling Interlocks for Fuel Handling and Vessel Servicing Equipment

B. Fuel Pool Liner and Gates

C. Fuel Pool Cooling and Cleanup

Table 1 (Cont'd.)

V. RADIOACTIVE WASTE DISPOSAL SYSTEMS

A. Process Radiation Monitoring System

1. Off-Gas Radioactivity Monitoring ~~Vent Pipe Radiation Monitoring~~

~~2. Off-Gas Monitoring~~

~~3. Aug Off Gas Monitoring~~

2.~~4.~~ Main Steam Line Monitoring

3.~~5.~~ Reactor Building Vent Monitoring (GE)

4.~~6.~~ Drywell and Suppression System Leak Rate

5.~~7.~~ Liquid Process Radiation Monitoring

B. Radioactive Waste Processing System

1. Dewatering System

2. Radioactive Waste Shipping

VI. OTHER SUPPORT SYSTEMS

A. Reactor Equipment Cooling

B. Service Water

C. Emergency Bypass Function on Control Room Heating, Vent, and AC

D. Reactor Recirculating (Pressure Retaining Parts Only)

E. Class I, II, and III Code Items

F. Reactor Feed Pumps (Pressure Retaining Parts Only)

G. Reactor Building H&V

H. Fire Protection

I. Security

J. Instrument Air

Table 1 (Cont'd.)

VII. STRUCTURES (SEISMICS)

A. Reactor Building

B. Control Building

C. Elevated Release Point

D. Intake Structure

E. Diesel Generator Building

F. Radwaste Building (Below Grade)

* Note - 1. This listing is not intended to be all inclusive.

2. Application of the QA Program to these systems and components shall be consistent with the safety-related significance of the system or component.

Table 2

THREE LEVEL QUALITY ASSURANCE PROGRAM
EXPLANATION OF FIRST, SECOND, AND THIRD LEVEL QA RESPONSIBILITIES

a) FIRST LEVEL - Work Performance and Quality Control.

Each person performing work for CNS is charged with the first-line responsibility for adherence to quality practices and procedures. An individual other than the one doing the work (not to include immediate supervisor) will have primary responsibility for Quality Control. Personnel at this level are charged with the responsibility for direct inspection, witnessing, and sign-off, attesting that work has been performed in accordance with the quality requirements of the controlling documents.

b) SECOND LEVEL ~~Surveillance/ Audit~~Management/Supervision Oversight.

Supervision and management personnel are responsible for providing workers and QC people with the proper procedures and guidance for performing quality work. These Managers and Supervisors are then responsible for second level ~~surveillance/audit~~ oversight as appropriate for work involved. The ~~CNS~~ Quality Assurance Managers ~~and CGO Quality Assurance Manager~~ are responsible for assuring that controlling documents for safety-related activities include appropriate quality requirements.

c) THIRD LEVEL-Quality Assurance Audit/Surveillance and Assessments.

QA Staff is responsible for maintaining surveillance and audits of the work at CNS and the CGO to assure that Quality Control and inspection programs are being implemented and that quality requirements are in fact being met. This includes verification that activities are properly performed and procedures are adequate for the activity they prescribe. Persons performing these audits are not directly involved in the day-to-day Inspection or Quality Control functions. Audits and/or surveillances will normally be performed by or under the direction of the appropriate QA Manager. In addition, SRAB shall be responsible for reviewing the results of audits and follow-up audits as described in Technical Specifications. The Quality Assurance Staff is also responsible for the evaluation of audit results and for verifying that identified corrective action requirements have been implemented.

Personal performing assessments are not directly involved in the day-to-day Inspection or Quality Control functions. Assessments will normally be performed under the direction of the Quality Assurance Assessment Manager or Senior line Management personnel, or at the discretion of on-site or off-site safety review bodies. Such assessments are conducted to provide the highest level of overview of implementation of the Quality Assurance Program as herein described.

PAGE	CHANGE	COMMITMENT REDUCTION
	Revised pagination, in total (page i through iv), as presented for NRC review.	No
ii	Section 3.2.2: Changed title of "Nuclear Power Group Manager" to "Vice President - Nuclear". Title change is the result of Nuclear Power Group (NPG) management reorganization and does not constitute a reduction in commitment or NPG Management responsibilities.	No
iii	Section 3.0: Changed "Quality Assurance Manager - CNS" to "Quality Assurance Operations Manager" and "Quality Assurance Manager - CGO" to "Quality Assurance Assessment Manager". Title changes are the result of NPG/QA reorganization and are not a reduction in commitment or NPG/QA Management responsibilities. Section 3.2.9, added "Nuclear Fuel Manager" to index. This change is an index omission, title and description have been represented in previous revisions. Section 3.2.13, added "Senior Manager of Safety Assessment" to the index. New position as the result of NPG organizational changes and therefore is not a reduction in commitment. Section 3.2.15: added "Columbus General Office" to (CGO). Section 3.2.16; added "Cooper Nuclear Station" to (CNS). Changes are editorial and therefore are not a reduction in commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
iv	Section 4.1.3, deleted "Quality Assurance Instructions (QAI)". QAIs requirements and responsibilities have been incorporated into NQPs and therefore is not a reduction in commitment. Deleted 4.1.4 and moved "Quality Assurance Plans (QAP)" to 4.1.3. Section 9.2 changed "three" to "four". Clarifies number of levels in the QA Program. Added level four to address QA Assessment. This is an enhancement to the QA Program and therefore is not a reduction in commitment.	No
v	Changed "Nuclear Power Group Manager" to "Vice President - Nuclear". Title change is the result of management reorganization and is not a reduction in commitment or NPG Management responsibilities.	No
1-3	Added "to standards presently committed to by CNS." This change clarifies which items are subject to revisions and therefore is not a reduction in commitment.	No
1-4	Section 1.3, deleted the words "Quality Assurance Instructions (QAIs)" from first sentence. This change does not constitute a reduction in commitment. Quality Assurance Instructions have been incorporated into Nuclear Quality Procedures (NQPs).	No
1-5	Item i): changed "Nonconformance" to "Corrective Action documents" and added "and associated resolutions". Deleted the word "resolved" and added "controlled" and "appropriate". This change clarifies that corrective action documents are to be filed as quality-related records, and does not constitute a reduction in commitment.	No
1-7	Deleted the "#1"before ANSI N45.2.10-1973 (format change).	No

PAGE	CHANGE	COMMITMENT REDUCTION
1-8	Added the definitions of "Assessment" and "Audit". This change defines QA Division functions and therefore is not a reduction in commitment. Added the definition of "Condition Report (CR)" . The CR has replaced the "Nonconformance Report (NCR)" as the vehicle for identifying and correcting conditions adverse to quality, per the CNS Corrective Action Program (CAP) and therefore is not a reduction in commitment.	No
1-9	Revised the definition for Designated Representative. Grammatical changes to enhance definition.	No
1-10	Added the definition of "Evaluation". This addition defines a QA Division function therefore does not constitute a reduction in commitment.	No
1-13	Revised the definition for Nuclear Quality Procedures (NQPs) to include responsibilities for implementation of the QA Program and guidance for surveillance, audit, assessment/evaluation activities to be performed by the QA Staff". This change incorporates the definition of QAIs and reflects the use of additional QA techniques, therefore does not decrease the level of commitment.	No
1-14	Deleted "QA Instruction," from the definition of Quality Assurance Documents. The requirements and responsibilities contained in QA instructions have been incorporated into Nuclear Quality Procedures (NQPs) and therefore is not a reduction in commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
	Deleted the definition of "Quality Assurance Instructions". The requirements and responsibilities defined in QAIs have been incorporated into NQPs in conjunction with the deletion of the QAIs and therefore is not a reduction in commitment.	
1-15	Deleted "1.13" and added "approved station" to the definition of "Quality Commercial Grade". Procedure number referenced was not correct. Generalized by stating "approved station procedure". This change will prevent errors of this nature and does not decrease the level of commitment.	No
1-18	Deleted "QAIs" from the definition of Surveillance. This change does not constitute a reduction in commitment. The requirements and responsibilities defined in QAIs have been incorporated into NQPs and therefore is not a reduction in commitment.	No
2-1	Section 2.1, Organization: changed "Nuclear Power Group Manager" to "Vice President - Nuclear" and deleted "Power" from Vice-President - Power Production. Title changes are the result of management reorganization and are not a reduction in commitment or NPG Management responsibilities. Added ",assessments, evaluations". This change reflects the use of additional QA techniques and therefore does not decrease the level of commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
2-2	Deleted "and Instructions"; the requirements of QAIs have been incorporated into the NQPs and therefore is not a reduction in commitment. Deleted "procedures are being followed" and added "specific work activities are being correctly completed" to more clearly define QC inspections. This is a clarification change and therefore is not a reduction in commitment.	No
2-3	Changed "ANSI N45.2.13" to "ANSI N45.2.12." This reference was in error. Deleted the "(a)" in item #3 to reflect appropriate format. These changes are not a reduction in commitment. Deleted "and Instructions", the requirements of QAIs have been incorporated into NQPs and therefore is not a reduction in commitment.	No
2-10	Section 2.4, Procurement Document Control: deleted "and Instructions" and added "and Nuclear Quality Procedures". QAIs have been incorporated into NQPs.	No
2-11	Added "QA" in front of "review and approval of suppliers" in third paragraph. Changed "Change Orders" to " Revisions". These changes are for clarification only and do not constitute reduction in commitment. Added an "s" to the words "Program" and "supplier" - grammatical change.	No

PAGE	CHANGE	COMMITMENT REDUCTION
2-14	Added "Nuclear Quality Procedures" to Level III and moved "Nuclear Power Group Directives" from Level IV to Level III. This change is being made due to the importance/subject of these documents and therefore does not decrease the level of commitment. Section 2.6, Document Control; deleted "Columbus General Office (CGO) and Cooper Nuclear Station (CNS)" and added "Nuclear Power Group (NPG)". The NPG refers to personnel in all Nuclear Divisions whether at Cooper Nuclear Station or the Corporate Office and therefore is not a reduction in commitment.	No
2-18	Section 2.9, Control of Special Processes: deleted "QA/" from QA/QC Inspection. This was in error, Quality Control Inspection is the intent, not QA and/or QC Inspection and therefore is not a reduction in commitment.	No
2-19	Added "Assessments/Evaluations." This change reflects the use of the additional Quality Assurance techniques and therefore is not a reduction in commitment.	No
2-20	Section 2.11, Test Control; deleted "Maintenance" between "Special" and "Procedures". Special maintenance procedures are currently implemented as " Special Procedures". The deletion of the word maintenance does not decrease the level of commitment. Added "Assessments/Evaluations". This change reflects the use of the additional Quality Assurance techniques and therefore is not a reduction in commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
2-22	Deleted "Nonconformance Report (NCR)" and added "Condition Report." The Condition Report has replaced the "Nonconformance Report" as the vehicle for identifying and correcting conditions adverse to quality, (per the CNS Corrective Action Program) and therefore, does not decrease the level of commitment. Added "NQPs" and deleted "Instructions". QAIs have been incorporated into NQPs and therefore, is not a reduction in commitment.	No
2-23	Added ",Assessments/Evaluations". This change reflects the use of the additional Quality Assurance techniques and therefore is not a decrease the level of commitment.	No
2-25	Section 2.15, "Nonconforming Materials, Parts, or Components"; deleted "The Nonconformance Reporting Program" and the description of the Program. The" Nonconformance Reporting Program" has been replaced with a new reporting system (Condition Reporting) per the "Corrective Action Program (CAP)". The Condition Reporting program is the vehicle for identifying and correcting conditions adverse to quality, and therefore, does not decrease the level of commitment. A description of the CAP has been added to section 2.16, Corrective Action (page 2-27).	No

PAGE	CHANGE	COMMITMENT REDUCTION
2-26	Edited and moved sentences, "A separate report shall be prepared for each nonconformance. The intent of this report requirement is to simplify follow-up, corrective action, and record keeping", to section 2.16, Corrective Action (page 2-28). Edited and moved the sentence, "Deficiencies and/or deviations identified by QA Staff shall be reported on a Quality Assurance finding form", to section 2.16, Corrective Action (page 2-29). Deleted "The Deficiency Report (DR) Program" and the description . The "Deficiency Report Program" has been replaced with a new reporting system (Condition Reporting) per the "Corrective Action Program (CAP)". The Condition Reporting program is not only the vehicle for identifying and correcting conditions adverse to quality, but also provides the method for reporting those conditions/occurrences of less significance for which analyses and/or corrective action is required. Therefore, this change is not a reduction in commitment. A description of the CAP has been added to section 2.16, Corrective Action (page 2-27). Deleted "as a nonconformance report" and added "per the Corrective Action Program". This change is not a reduction in commitment in that "Nonconformance Reports" have been replaced with a new reporting system per the "Corrective Action Program". A description of the CAP has been added to section 2.16, Corrective Action (page 2-27).	No

PAGE	CHANGE	COMMITMENT REDUCTION
2-27	Edited and moved the sentence, "The CGO QA Department will issue a quarterly trend report to the Nuclear Power Group Manager which may identify adverse trends that require corrective action", to section 2.16, Corrective Action (page 2-28).	No
2-27/ 2-28	Section 2.16, Corrective Action: added "Corrective Action Program (CAP) ". This addition reflects the requirements and purpose of the present Corrective Action Program with no reduction in commitments. Added, "The CAP shall be utilized by all personnel performing operation, maintenance, modification, or other quality related functions/activities at CNS, to document and report deficiencies/discrepancies ..." along with several examples.	No

PAGE	CHANGE	COMMITMENT REDUCTION
2-28	Reinstated the sentences from page 2-26 , "A separate report shall be prepared for each nonconformance. The intent of this report requirement is to simplify follow-up, corrective action, record keeping", adding, "and trending." Reinstated the sentence from page 2-27, concerning the trend report, with the following changes ; "CGO QA Department" to "QA Division", and "Nuclear Power Group Manager" to "Vice President-Nuclear". These changes are the result of NPG Management and QA Division reorganizations and is not a reduction in commitment or NPG responsibilities. Deleted; "A monthly status report of open NCR's shall be prepared and distributed to": and all "titles" following this sentence (page 2-28/2-29). This method of statusing open NCRs to management has become obsolete. The Nonconformance Report Program has been replaced and rolled over into the new "Condition Reporting" system, per the CNS Corrective Action Program. Management meets frequently to discuss status and determination of classification of CRs. The status of corrective action documents is also continuously tracked by the NPG Action Item Tracking (NAIT) database. Based on the data in NAIT, CNS issues reports to management monthly providing current status information, for update or closure. Therefore this change is not considered a reduction in commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
2-29	Reinstated the sentence from page 2-27 with the following changes; "Deficiencies and/or deviations identified by QA Staff personnel shall be reported on a Quality Assurance finding form" to "Deficiencies and/or deviations identified by QA Staff personnel shall be reported per the guidance defined in Nuclear Quality Procedures and/or the CNS Corrective Action Program." The Corrective Action Program provides the vehicle (Condition Report) utilized for identifying and correcting conditions adverse to quality, and significant conditions adverse to quality as described in 10CFR50, Appendix B. Condition Reports also provide a method for identification and correction of those conditions/occurrences of less significance for which analyses and/or corrective action is required. QA generated or prompted CRs will require follow-up and concurrence as was required by the previous finding process. Therefore, this change is not a reduction in commitment, rather a change in QA reporting practices/requirements.	No
2-32	Added "Supervisory" to Item (5). This change reflects an alternative method of inspection for cleanliness and therefore is not a reduction commitment.	No
2-33	Added ",Assessment/Evaluation" to Item (6). This change reflects the use of additional QA techniques of assessment and evaluation and therefore does not decrease the level of commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
2-34	Added, "and work packages". This change is being made to clarify the process and does not constitute a reduction in commitment. Added, ANSI N45.2.23-1978, "Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants". This standard is applicable to the Operational QA Program at CNS and to the Quality Assurance Division Training Program. This change adds the standard referenced in the NPPD Quality Assurance Division Training manual, which represents a requirement of the current program, and therefore is not a reduction in commitment.	No
3-1	Section 3.1, General, changed "divisions" to "levels". Changed, "which provides for Quality Control, independent Quality Assurance Surveillance, and Quality Assurance Audits" to "Work Performance and Quality Control, Management/Supervision Oversight, Quality Assurance Audit/Surveillance and Assessments." These changes more accurately describe the level of QA program implementation and accountability. The QA and NPG Assessment function is considered to be a program enhancement and therefore is not a reduction in commitment.	No
3-2	Changed "Nuclear Power Group Manager" to "Vice President-Nuclear" throughout. This change is the result of management reorganization and is not a reduction in commitment or NPG management responsibilities.	No

PAGE	CHANGE	COMMITMENT REDUCTION
3-3	Deleted the "C" in "CGO". "Columbus" is stated. This change is editorial and not a reduction in commitment. Deleted "instructions" and added "procedures". QAIs have been incorporated into NQPs and therefore is not a reduction in commitment. Deleted "Quality Assurance Instructions" and added "Quality Assurance" to Plans. QAIs have been incorporated into NQPs and therefore is not a reduction in commitment. Changed "direct" to "administrative". Evaluating suppliers of nuclear safety-related equipment, materials, and spare parts and for auditing the QA/QC activities of such suppliers is the responsibility of the QA Assessment Manager, which reports directly to the Division Manager of Quality Assurance, as described in Section 3.2.4 (page 3-6). Deleted "Columbus CGO and Cooper Nuclear Station" and added "Nuclear Power Group". The Nuclear Power Group refers to personnel in all nuclear divisions whether at Cooper Nuclear Station or Corporate Office and therefore is not a reduction in commitment. Changed "Nuclear Power Group Manager" to "Vice President-Nuclear". This change is the result of management reorganization and is not a reduction in commitment or NPG Management responsibilities.	No

PAGE	CHANGE	COMMITMENT REDUCTION
3-4	Deleted "Nuclear Operations and Nuclear Engineering and Construction Division". Added "Nuclear Power Group Divisions". "Nuclear Power Group Divisions" encompasses those divisions previously listed plus all others within the NPG and therefore is not a reduction in commitment. Edited and reinstated the sentence from page 3-7, concerning responsibilities of the DMQA in his absence, as follows: "Unless otherwise provided for in writing, the QA Operations Manager or the QA Assessment Manager (depending on their availability) shall function as the Division Manager of Quality Assurance in his absence." Section 3.2.4, changed title from Quality Assurance Manager-CNS to Quality Assurance Operations Manager. Changed "Quality Assurance Manager-CNS " to "Quality Assurance Operations Manager" throughout this section (pages 3-4 through 3-6). Title change is the result of reorganization of the Quality Assurance Division and is not a reduction in commitment or QA Management responsibilities. Changed "at CNS" to "as described herein". Deleted "also" and added "programs". Changed "Cooper Nuclear Station" to "Nuclear Power Group." Added "QA review of the design and engineering functions within the NPG, including configuration management, shall be included in such programs."and added "These activities/ programs shall". Changed "NPPD Quality Assurance Manual" to "the CNS QA Program for Operation" and "NPPD QA Manual" to "QA Policy Document". The QA Operations Manager is responsible	No

PAGE	CHANGE	COMMITMENT REDUCTION
	for QA Operations Department activities/programs including QA surveillance and audit within the NPG (CGO and CNS). These additions/changes clarify responsibilities of this position and therefore are not a reduction in commitment.	
3-5	Changed "Site Manager and his staff" to "Senior Management and their Staff." This change encompasses the Site Manager/ Senior Managers and Staff and therefore is not a reduction in commitment. Added the sentence, "In addition, the QA Operations Manager shall ensure that training programs and instruction are provided for QA Operations personnel to enable them to effectively execute and monitor the Quality Assurance Program for Operation." This addition clarifies those personnel for which the QA Operations Manager is responsible to provide training and therefore is not a reduction in commitment. Changed "CNS" to "Operations". Clarifies those QA personnel which report to the QA Operations Manager and therefore is not a reduction in commitment. Deleted "listed in Section 4.1.3 on an announced basis" and added "as defined in Quality Assurance Plans." This change is a clarification of the audit process and is not a reduction in commitment. Deleted "Quality Assurance Instructions" and added "Quality Assurance" before Plans. QAIs have been incorporated into NQPs and therefore is not a reduction in commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
3-6	Edited responsibility in sentence concerning maintenance of the Quality Assurance Program for Operation (Policy Document), from section 3.2.5, QA Assessment Manager and reinstated in section 3.2.4, Quality Assurance Operations Manager. This change is not a reduction in commitment or QA Management responsibilities. Section 3.2.5, changed title of Quality Assurance Manager-CGO to Quality Assurance Assessment Manager . Changed "Quality Assurance Manager-CGO " to "Quality Assurance Assessment Manager" throughout this section (page 3-6 through 3-8). Title change is the result of reorganization of the Quality Assurance Division and is not a reduction in commitment or QA Management responsibilities. Added "for Operation" and changed "within the CGO" to "as described herein". Added "This responsibility includes the authority for implementing and maintaining the QA Assessment/Evaluation Program and the program for evaluating suppliers for safety-related equipment, materials, spare parts and services and for auditing the QA/QC activities of such suppliers." These additions/changes clarify responsibilities of this position and therefore are not a reduction in commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
3-7	Added, "The QA Assessment Manger shall advise and assist Senior Management and their staff in all matters which affect the quality of the station" This addition clarifies responsibilities of this position and therefore is not a reduction in commitment. Deleted sentence concerning maintenance of the Quality Assurance Program for Operation (Policy Document), edited responsibility, and moved to section 3.2.4, Quality Assurance Operations Manager. This change is a transfer of responsibility and not a reduction in commitment or QA Management responsibilities. Deleted and moved the sentence regarding the G.O. Quality Assurance Staff supporting the CNS QA Staff in quality matters such as internal audits and outage coverage, to section 3.2.7, Quality Assurance Staff (page 3-8/3-9). This change is not a reduction in commitment. Changed "CGO Nuclear Divisions" to "NPG personnel". This changes is editorial and therefore is not a reduction in commitment. Deleted "They shall also be responsible to perform scheduled surveillance within the General Office and verify that corrective action has been implemented." Edited and moved "The CGO QA Manager shall establish a program for QA review of the design/engineering function in the CGO, including configuration management."to section 3.2.4 (page 3-4). The QA Operations Manager is responsible for performance of QA Division surveillance and audit (including QA review/audit of engineering functions and configuration management) and for verification that associated corrective action has been	No

PAGE	CHANGE	COMMITMENT REDUCTION
3-7	implemented (CNS and CGO). These changes are a transfer of responsibility and not a reduction in commitment or QA Management responsibilities. Deleted "Instructions". QAIs have been incorporated into the NQPs, and therefore is not a reduction in commitment. Changed "at the General Office" to "conducted within the NPG". The QA Assessment Manager is responsible for interface with NRC inspections within the NPG (CGO and CNS), and therefore is not a reduction in commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
3-8	Edited the paragraph concerning QA personnel training and instruction programs to read as follows; "In addition, the QA Assessment Manager shall ensure that training programs and instruction are provided for QA Assessment and QA Supplier personnel to enable them to effectively execute and monitor the Quality Assurance Program for Operation." This change clarifies those personnel for which the QA Assessment Manager is responsible to provide training, and therefore is not a reduction in commitment. Deleted "Unless otherwise provided for in writing, the General Office Quality Assurance Manager shall act for the Division Manager of Quality Assurance in his absence.", edited and moved to Section 3.2.3, Division Manager, Quality Assurance (page 3-4). Changed "General Office Quality Assurance Staff" to "Quality Assurance Supplier Staff" in title of section 3.2.7 and the first sentence. Added, "reporting to the QA Assessment Manager," This change clarifies the reporting relations of the General Office QA Staff to the QA Assessment Manager and therefore is not a reduction in commitment or QA Management responsibilities. Changed "General Office" to "NPG". The QA Supplier Staff is responsible to assist and advise the QA Assessment Manager on matters which could effect QA activities within the NPG (CGO and CNS), and therefore is not a reduction in commitment. Deleted "and for the performance of audits and surveillances of work activities within the General Office on an announced or unannounced basis".	No

PAGE	CHANGE	COMMITMENT REDUCTION
3-8	The function to conduct announced or unannounced audits and surveillances within the NPG (CGO and CNS) is performed by the QA Operations Staff under the direction of the QA Operations Manager,and therefore is not a reduction in commitment or QA responsibilities. Reinstated and edited the sentence from Section 3.2.5 (page 3-7), regarding the G.O. Quality Assurance Staff (changed to QA Supplier Staff) supporting the CNS QA Staff in quality matters such as internal audits, surveillance, assessments/evaluations and outage coverage, to section 3.2.7, Quality Assurance Staff (page 3-8/3-9). This change is not a reduction in commitment.	

PAGE	CHANGE	COMMITMENT REDUCTION
3-9	Changed "CGO QA Manager" to "QA Assessment Manager" and deleted "CGO"before QA Supplier Supervisor. Title changes are the result of QA Division organization changes and therefore are not a reduction in commitment. Moved, ";and development and implementation of the QA engineering function" from General Office Quality Assurance Staff to CNS Quality Assurance Staff (same page) . This responsibility has been transferred from the CGO QA Staff (changed to the QA Supplier Staff) to the CNS QA Staff/Management and therefore is not a reduction in commitment or QA Division responsibilies. Section on CNS Quality Assurance Staff : deleted "performing QA activities within the station, advise and assist" and added "advising and assisting"; deleted "all station" and added "NPG"; changed "verify" to "verification"; changed "perform audits and surveillances" to "performance of QA activities (audits, assessments, evaluations, and surveillances)"; deleted "of work activities" and "CNS" and added "the NPG". These changes are editorial and therefore are not a reduction in commitment or QA Division responsibilities. Deleted "and Instructions". QAIs requirements and responsibilities have been incorporated into the NQPs and therefore is not a reduction in commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
3-10	Deleted, "the other respective Division Managers, Site Manager or Plant Manager" to "Senior Management personnel, as appropriate". The titles listed all fall into the category of "Senior Management" and therefore is not a reduction in commitment . Title changed from Secretary to the Division Manager of QA to the Secretary to the QA Operations Manager. Changed, "Division Manager of QA" to "QA Operations Manager." Duties of administering and controlling the QA Program document distribution has been reassigned to the Secretary of the Operations Quality Assurance Manager rather than the Secretary to the Division Manager of QA. This change is the result of QA Division reorganization and is not a reduction in commitment or QA Division responsibilies. Deleted "Quality Assurance Instructions". QAIs have been incorporated into NQPs as described previously and therefore is not a reduction in commitment. Section 3.2.8, Division Manager- Nuclear Engineering and Construction, changed "Nuclear Power Group Manager" to "Vice President - Nuclear." This change is the result of NPG management reorganization and is not a reduction in commitment or NPG Management responsibilities.	No

PAGE	CHANGE	COMMITMENT REDUCTION
3-11	Section 3.2.10, Site Manager, changed "Nuclear Power Group Manager" to "Vice President - Nuclear." This change is the result of NPG management reorganization and is not a reduction in commitment or NPG Management responsibilities.	No
3-12	Added Section 3.2.13, "Senior Manager of Safety Assessment" and a description of responsibilities; "The Senior Manager of Safety Assessment, under the direction of the Site Manger, shall provide the management focal point for Nuclear Safety at CNS. This includes responsibility for oversight activities related to Nuclear Safety at CNS." This change is the result of NPG management reorganization and is not a reduction in commitment or NPG Management responsibilities. Section 3.2.14, Division Manager - Nuclear Support, changed "Nuclear Power Group Manager" to "Vice President - Nuclear." This change is the result of NPG management reorganization and is not a reduction in commitment or NPG Management responsibilities. Section 3.2.15, added "Columbus General Office" to title and on section 3.2.14, added "Cooper Nuclear Station" to title. Section 3.2.16, deleted "Plant" and added "Site". This change is the result of NPG management reorganization and is not a reduction in commitment or NPG Management responsibilities.	No

PAGE	CHANGE	COMMITMENT REDUCTION
3-13	Section 3.5, Safety Review and Audit Board, added "The Safety Review and Audit Board (SRAB) has been established to provide independent review and audit of designated activities." Verbiage extracted from CNS Technical Specifications. The last paragraph in Section 3.5, edited "Reference 7.14". This change is editorial and is not a reduction in commitment.	No
4-1	Deleted "and instructions" (twice). QAIs requirements and responsibilities have been incorporated into the NQPs and therefore is not a reduction in commitment. Section 4.1, NPPD Internal Documents, deleted "QA/" from QA/QC checkpoints. This was in error, Quality Control checkpoints is the intent, not QA and/or QC checkpoints; no reduction in commitment. Deleted "QAIs" and "Instruction", added "Procedure". QAIs requirements and responsibilities have been incorporated into the NQPs and therefore is not a reduction in commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
4-2	Section 4.1.1, Quality Control Inspection , deleted "preparation" and added "implementation". This change is an editorial clarification and therefore is not a reduction in commitment. Changed "CNS QA Manager" to "QA Operations Manager". This title change is the result of QA Division reorganization and is not a reduction in commitment or QA Management responsibilities. Changed "Manager" to "Management" and added "NPG". The first change is the result of QA Division reorganization, the second change is editorial, neither is a reduction in commitment.	No
4-3	Section 4.1.2, Nuclear Quality Procedures (NQP), changed "Nuclear Power Group Manager" to "Vice President - Nuclear". This change is the result of NPG management reorganization and is not a reduction in commitment or NPG Management responsibilities.	No

PAGE	CHANGE	COMMITMENT REDUCTION
4-4	Deleted section 4.1.3 "Quality Assurance Instructions (QAI)". These instructions were incorporated into the Nuclear Quality Procedures (NQPs), which have an equivalent level of hierarchy, therefore this does not constitute a reduction in the level of commitment. The edited description of QAIs has been incorporated into the definition of NQPs (page 1-13). Section"4.1.4"has been changed to section "4.1.3". Section 4.1.3, deleted "Concurrent with the preparation of work procedures, and during operations or maintenance activities," and "A QAP shall be developed for each functional area defining the scope of the QA program." Added "QAPs shall be developed which encompass those functional areas described within, defining the scope of the QA program." These changes are for clarification describing the function of QAPs and therefore is not a reduction in commitment. Deleted "QAI" and added "NQP". QAIs have been incorporated into NQPs and therefore is not a reduction in commitment.	No
4-5	Added "affected Senior Management personnel" and deleted the specific titles for review of revision submittals of QAPs. This change deletes specific titles and adds "affected Senior Management" to the review of new/revised QAPs which does not decrease the level commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
	Deleted "as described by QAIs after reviewing the work procedures describing the" and added "per the guidance provided in Nuclear Quality Procedures, defining the scope of " and changed "guidelines" to "activities". QAI requirements have been incorporated into the NQPs. NQPs provide guidance for development of QA surveillance and audits checklists as did the QAIs, and therefore is not a reduction in commitment.	
4-6	Deleted "QAIs". QAIs have been incorporated into the NQPs and therefore is not a reduction in commitment.	No
4-7	Changed "General Office Quality Assurance Manager" to "Quality Assurance Assessment Manager" and "CNS Quality Assurance Manager" to "Quality Assurance Operations Manager". Title changes are the result of QA Division reorganization and are not a reduction in commitment or QA Management responsibilities. Deleted "QAI-5" and added "Nuclear Quality Procedures". QAIs have been incorporated into the Nuclear Quality Procedures and therefore is not a reduction in commitment.	No
5-1	Deleted "NQPs, QAIs and QAPs" and added "written and approved procedures". QAIs have been incorporated into the NQPs. NQPS/QAPs are being referred to as "written and approved procedures " and therefore is not a reduction in commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
5-2	Deleted "QAIs" and "Instructions". QAIs have been incorporated into the NQPs and therefore is not a reduction in commitment. Changed "Vice President - Production" to "Vice President - Nuclear" as the result of NPG reorganization and is not a reduction in commitment or NPG Management responsibilities.	No
6-1	Deleted "after they have been dedicated. This dedication occurs when the activity to the document becomes part of the operating condition of the plant." and added "per the requirements of station procedure and ANSI N45.2.9-1974." This is a clarification change and therefore is not a reduction in commitment.	No
7-2	Added reference ANSI N45.2.23-1978, "Qualifications of Quality Assurance Program Audit Personnel for Nuclear Power Plants."	No
8-1	Figure 1 was revised to reflect organization changes as previously described in various sections of the text. These changes dos not constitute a reduction in commitment or NPG Management responsibilities.	No

PAGE	CHANGE	COMMITMENT REDUCTION
9-1	Changed title from "SYSTEMS AND MAJOR COMPONENTS COVERED BY THE QUALITY ASSURANCE PROGRAM" to "SYSTEMS AND COMPONENTS WITHIN THE SCOPE OF THE CNS QA PROGRAM". Changed title to read as title in the "TABLE OF CONTENTS" (editorial) and therefore is not a reduction in commitment. Item III.B "Rod Sequence Control System (RSCS)" was deleted. This system was removed during last scheduled outage on a approved Design Change and therefore no longer is required to be covered by the QA program. This change does not constitute a reduction in commitment; the removal of the RSCS was done in reference to the NRC acceptance of Amendment 17 to General Electric's Topical Report, NEDE-24011-P-A "General Electric Standard Application for Reactor Fuel" (Attachment 14 and 15). This document justified the removal of the RSCS.	No
9-2	Editorial changes to the numbering format. Section "G"(now "F") was revised in writing out meanings of abbreviations. These changes do not constitute a reduction in commitment.	No
9-3	On Section V.A the first three items were combined to read: "Off-Gas Radioactivity Monitoring". Added item B.1 and 2 to include "Radioactive Waste Processing System 1. Dewatering System 2. Radioactive Waste Shipping." These changes are an enhancement to the program and therefore are not a reduction in commitment.	No

PAGE	CHANGE	COMMITMENT REDUCTION
9-5	Table 2. b , SECOND LEVEL, changed title from Surveillance/ Audit to Management/Supervision Oversight. Revised to reflect that management and supervision are responsible for second level oversight. Changed "surveillance/audit" to "oversight", and deleted "CNS" and "and CGO Quality Assurance Manager". Th clarifies second level QA responsibilities of Management/Supervision (surveillance/audit) as "oversight", not to be confused with the "surveillance/audit" function of the third level - QA Staff. This changed is not considered to be a reduction in commitment. Table 2. c , THIRD LEVEL, added "/Surveillance and Assessments" to the title. This change clarifies that surveillance and assessment are included in the third level QA responsibilities. This change reflects the use of additional QA and NPG techniques, and therefore is not a reduction in commitment.	No

Response to NRC's "Request for Additional Information"

"Page 1-19

Comment:

Section 1.5 Definition of Terms: The term QA Instructions (QAIs) was deleted. Revision 9 stated that QAIs defined the responsibilities for implementation of the QA Program and, in addition, they provided guidance for surveillance and audit activities performed by the QA Staff. Revision 10 deleted this paragraph from the QA Program because these QAIs are being incorporated into the Nuclear Quality Procedures (NQPs). For this change to be acceptable, the definition of NQPs needs to include the responsibilities and guidance statements from the previously deleted definition of QAIs."

Response:

As noted, the definition for Nuclear Quality Procedures (NQPs) did not include the stipulation that guidance for surveillance and audit activities, performed by the QA Staff, are subject to these procedures. Please find that the responsibilities and guidance statements have been reinstated as appropriate. (Page 1-13, Definition of Nuclear Quality Procedure)

"Page 2-6

Comment:

Section 2.3 Design Control: The third paragraph deleted the QA Division in-line review and independent evaluation of QA requirements of all design changes initiated for CNS. These in-line reviews/evaluations were replaced with reviews of randomly selected design changes by QA. CNS states that "by removing QA from this in-line review it will enhance the QA program via instilling QA principles to the line organization." CNS provides no justification to support this statement. Before deleting the in-line review of QA requirements of design changes by the QA Division, CNS should assure itself that this review can be replaced by a random audit program with no decrease in quality. For instance, CNS could collect data that would indicate whether these reviews are identifying design or procedure deficiencies. If the line organizations have demonstrated that they consistently produce high quality design change documents that met all the QA requirements, then a program that verifies the high quality is maintained (i.e., pre-planned and random audits) would be justified.

In addition, Revision 10 should include a commitment to reinstate the in-line review whenever the results of an alternate program (e.g., random audits) show an unacceptable quality level."

Response:

Changes to Section 2.3, "Design Control" (Page 2-5), are no longer being pursued. QA Division review of Design Changes will continue to be performed as previously committed.

"Page 2-13

Comment:

Section 2.4 Procurement Document Control: The third paragraph deleted the in-line responsibilities of QA review of essential and quality commercial grade purchasing documents. This represents a reduction in commitments which requires additional justification for our review. Refer to our comments for page 2-6."

Response:

Changes to Section 2.4, "Procurement Document Control" (Page 2-10), are no longer being pursued. QA Division review of procurement documents will continue to be performed as previously committed.

"Page 2-16

Comment:

Section 2.5 Instructions, Procedures, and Drawings: Deleted the in-line review of procedures by QA that address special processes, special test procedures, and special maintenance procedures. This represents a reduction in commitments which requires additional justification for our review. Refer to our comments for page 2-6."

Response:

Changes to Section 2.5, "Instructions, Procedures, and Drawings" (Page 2-12), are no longer being pursued. QA Division review of procedures which address special processes, special test procedures, and special procedures will continue to be performed as previously committed.

"Page 2-22

Comment:

Section 2.9 Control of Special Processes: Sentence two deleted QA from the in-line review of general maintenance procedures that provide for performance of special processes. This represents a reduction in commitments which requires additional justification for our review. Refer to our comments for page 2-6."

Response:

Proposed changes to Section 2.9, "Control of Special Processes" (page 2-18), are no longer being pursued. QA Division review of Special Processes will continue to be performed as previously committed.

"Page 2-31

Comment:

Section 2.15 Nonconforming Materials, Parts,or Components: Deleted the sentence "Deficiencies and/or deviations identified by QA Staff personnel shall be reported on a Quality Assurance finding form." CNS says that deficiencies identified by QA will be documented per the Corrective Action Process (CAP); however, this is not addressed in this section of the QA Program."

Response:

As noted, proposed Revision 10 submittal did not address how deficiencies identified by the QA Staff were going to be documented.

Clarification has been incorporated on page 2-29 of section 2.16. The sentence now reads: "Deficiencies and/or deviations identified by QA Staff personnel shall be reported per the guidance defined in Nuclear Quality Procedures and the CNS Corrective Action Program." Additional justification is provided in Attachment "A" of the revised Revision 10 submittal.

"Page 3-8

Comment:

Section 3.2.5 Quality Assurance Assessment Manager: Deleted the sentence "they shall also be responsible to perform scheduled surveillance within the General Office and verify that corrective action has been implemented." It is not clear if this function still exists or who currently has this responsibility.

The last sentence of this page was deleted stating, in part, that "the General Office Quality Assurance Manager shall act for the Division Manager of Quality Assurance in his absence." The justification provided for this deletion was that "this level of detail is not required to be in the Policy Document." This may be acceptable justification, but it still represents a reduction in commitments requiring NRC approval prior to implementation."

Response:

The function to conduct scheduled or unscheduled surveillances within the Nuclear Power Group (CNS and CGO) is under the direction and responsibility of the QA Operations Manager . Clarification has been added to the first sentence in section 3.2.4 (page 3-4). It now states: " The Quality Assurance Operations Manager, reporting to the Division Manager of Quality Assurance, shall be responsible for and have the authority to perform, direct, or coordinate QA Surveillance and Audit activities within the Nuclear Power Group."

The last sentence of section 3.2.5 (page 3-8) has been revised and moved to section 3.2.3 (page 3-4), to reflect that the QA Operations Manager or the QA Assessment Manager (depending availability) shall function as the Division Manager of Quality Assurance during his absence.

"Page 3-9

Comment:

Section 3.2.7 Quality Assurance Staff: Deleted the first two paragraphs that identifies the "General Office Quality Assurance Staff" responsibilities. CNS said that these responsibilities will be under the direction of the QA Assessments Manager; however, it was not apparent that Revision 10 of the QA Program reassigned these responsibilities to the QA Assessments Manager."

Response:

In the proposed Revision 10, it is not clear that a portion of the General Office Quality Assurance Staff (Supplier Group) remains at the General Office and reports directly to the QA Assessment Manager. Two paragraphs in Section 3.2.7 (page 3-8/3-9) have been restated to clarify that the QA Assessment Manager is responsible for the General Office - QA Supplier Group.

"Page 3-11

Comment:

Section 3.2.7 Quality Assurance Staff: Deleted section entitled "Secretary to the Division Manager of QA." The responsibilities and duties were shifted to the QA Managers secretary, however, this does not appear to have been included in Revision 10. Additional information is requested regarding where these responsibilities and duties were relocated in the QA Program Description."

Response:

This paragraph has been re-stated in section 3.2.7 (page 3-10), clarifying that the Secretary to the QA Operations Manager rather than the Secretary to the Division Manager of QA is responsible for administering and controlling the QA Program document distribution.

"Page 3-12

Comment:

Section 3.2.9 Site Manager: "Site Manager" was deleted and responsibilities were redistributed to Senior Management. Clarification is needed to describe how the responsibilities were assigned and where they are located in the QA Program Description. It's not clear where the Site Manager fitted into the hierarchy of the QA organization chart; this information is required for our review to determine if responsibilities were redistributed to Senior Management of same or higher level."

Response:

Since the initial issuance of proposed Revision 10 to the Policy Document, reorganizational changes have occurred at Cooper Nuclear Station. One change consisted of hiring a new "Site Manager". Therefore, the responsibilities of the Site Manager remain the same as described in Revision 9 of the Policy Document, no change is necessary. (Refer to Section 3.2.10, page 3-11)

"Page 3-15

Comment:

Section 3.5 Safety Review and Audit Board (SRAB): Changed wording to generalize the responsibilities for SRAB to coincide with how the responsibilities are worded for Station Operations Review Committee (SORC) in Section 3.6. This change may require an amendment to the Technical Specifications."

Response:

This paragraph has been reinstated, Section 3.5 (page 3-13), adding the sentence, "The Safety Review and Audit Board (SRAB) has been established to provide independent review and audit of designated activities."

"Page 3-17

Comment:

Section 3.7 Outside Suppliers, Contractors, Subcontractors, and Consultants: Deleted the in-line review of procurement documents by QA. This represents a reduction in commitments which requires additional justification for our review. Refer to our comments for page 2-6."

Response:

Changes to Section 3.7 (page 3-14), "Outside Suppliers, Contractors, Subcontractors, and Consultants"are no longer being pursued. QA Division review will continue to be performed as previously committed.

"Page 4-1

Comment:

Section 4.1 NPPD Internal Documents: Deleted in-line review of work procedures by QA. This represents a reduction in commitments which requires additional justification for our review. Refer to our comments for page 2-6."

Response:

Changes to Section 4.1, "NPPD Internal Documents" (page 4-1), are no longer being pursued. QA Division review will continue to be performed as previously committed.

"Page 4-2

Comment:

Section 4.1.1 Quality Control Inspection: Deleted second paragraph requiring the QA Operations Manager to verify that QC inspections are incorporated into work