STATEMENT OF AUTHORITY AND RESPONSIBILITY

Consumers Power Company has documented its Quality Assurance Program for the Midland Energy Center in a corporate document entitled, Consumers Power Company Quality Assurance Program Plan for the Shutdown Phase of the Midland Energy Center. This plan outlines the actions that are implemented by Consumers Power Company personnel on safety-related portions of the Midland Energy Center.

The Consumers Power Company Quality Assurance Program for the Midland Energy Center complies with the Quality Assurance Requirements contained in Appendix B of 10CFR50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants" and responds to the additional guidance contained in the ANSI N45.2 series of standards and corresponding Regulatory Guides.

As Chief Executive Officer of Consumers Power Company, I have the ultimate management authority for the establishment of corporate QA policy. That policy shall be to comply with the provisions of applicable legislation and regulations and to commit to the requirements stated in the previous paragraph. Responsibility for the establishment of the Quality Assurance Program Plan to comply with this overall policy for the shutdown phase is assigned to the Executive Vice President. Responsibility for preparing and maintaining the Quality Assurance Program Plan is further assigned to the Manager, Quality Assurance Division, who reports to the Vice President - Projects, Engineering and Construction who, in turn, reports to the Executive Vice President.

The Quality Assurance Program Plan and implementing Departmental Procedures are mandatory requirements which must be implemented and enforced by all responsible organizations and individuals.

J D Selby,
Chairman of the Board
and President

CONSUMERS POWER COMPANY	QUALITY ASSURANCE PROGRAM PLAN FOR THE SHUTDOWN PHASE OF THE MIDLAND ENERGY CENTER	PAGE 1 OF 1 REVISION 0 DATE 10/1/84

APPROVALS

Manager, Quality Assurance Division — Date 9/27/84

Director, Environmental and Quality Assurance — for BWM — Date 9-28-84

Vice President - Projects, Engineering & Construction — James W. Cook — Date 9/28/84

Executive Vice-President — Date 10-1-84

QUALITY ASSURANCE PROGRAM PLAN INDEX

INTRODUCTION

1.0 On July 16, 1984, the Consumers Power Company (CPCo) Board of Directors ordered the shutdown of design, construction and preoperational testing activities associated with the Midland Energy Center.

2.0 This CPCo Quality Assurance Program Plan (QAPP) establishes the quality assurance requirements for the Shutdown Phase to provide for:

a) the preservation of assets within available resources,
b) the maintenance of the NRC Construction Permit.

3.0 This QAPP addresses the Codes, Standards and Regulatory Guides that are applicable during the Shutdown Phase.

4.0 This QAPP supersedes Topical Report CPC-1A (Volume I) and the Quality Assurance Program Procedures Manual (Volume II). Volume I and Volume II will not be updated during the Shutdown Phase.

5.0 This QAPP is implemented on October 1, 1984 with full compliance by January 1, 1985.

6.0 Shutdown Phase activities related to ASME Code requirements are subject to overview by Bechtel Power Corporation (BPCo) and Babcock and Wilcox Construction Company (B&WCC). BPCo and B&WCC activities are performed in accordance with procedures approved by CPCo.

ORGANIZATION

1.0 POLICY

1.1 Authority and responsibility for shutdown activities at the Midland Energy Center are shown in Attachment 1. Authority and responsibility are assigned from the President to the Executive Vice President and, in turn to the Vice President, Projects, Engineering and Construction, who heads the Midland Project Organization.

1.2 The Manager, Quality Assurance Division (QAD) has the authority and responsibility for assuring the implementation of this Quality Assurance Program Plan (QAPP).

2.0 PRACTICE

2.1 The Midland Project Organization elements which are responsible for the conduct of safety-related activities are Site Management, Engineering and Licensing and QAD. Environmental and Quality Assurance is responsible for review and approval of this QAPP.

2.2 Site Management is responsible for:

a) implementation of the layup and maintenance program,
b) administration of site purchase orders and contracts,
c) salvage and material identification and control,
d) warehousing,
e) interface with regulatory authorities for site related matters,
f) records management, and
g) housekeeping.

2.3 Engineering and Licensing is responsible for:

a) technical criteria for the maintenance and layup program,
b) administering non-site purchase orders and contracts,
c) statusing and dispositioning engineering documentation and records,
d) licensing functions,
e) engineering activities to support shutdown phase activities, and
f) classification of structures, systems and components.

ORGANIZATION

2.4 QAD is responsible for:

a) preparing and maintaining this QAPP;

b) executing the assurance functions (eg, reviews, audits, inspections, monitors and analyses) to assure shutdown activities are conducted in accordance with established requirements;

c) certification of inspection, examination and audit personnel; and

d) the control of further processing, delivery or use of nonconforming items.

2.5 The Midland Project Organization may assign safety-related activities to other CPCo organizations, contractors, subcontractors and suppliers. Such assignments require conformance with the applicable elements of this QAPP. Typically, such assignments are for:

a) procurement,
b) calibration services,
c) Records Center management,
d) consulting services,
e) non-destructive examinations, and
f) source inspection.

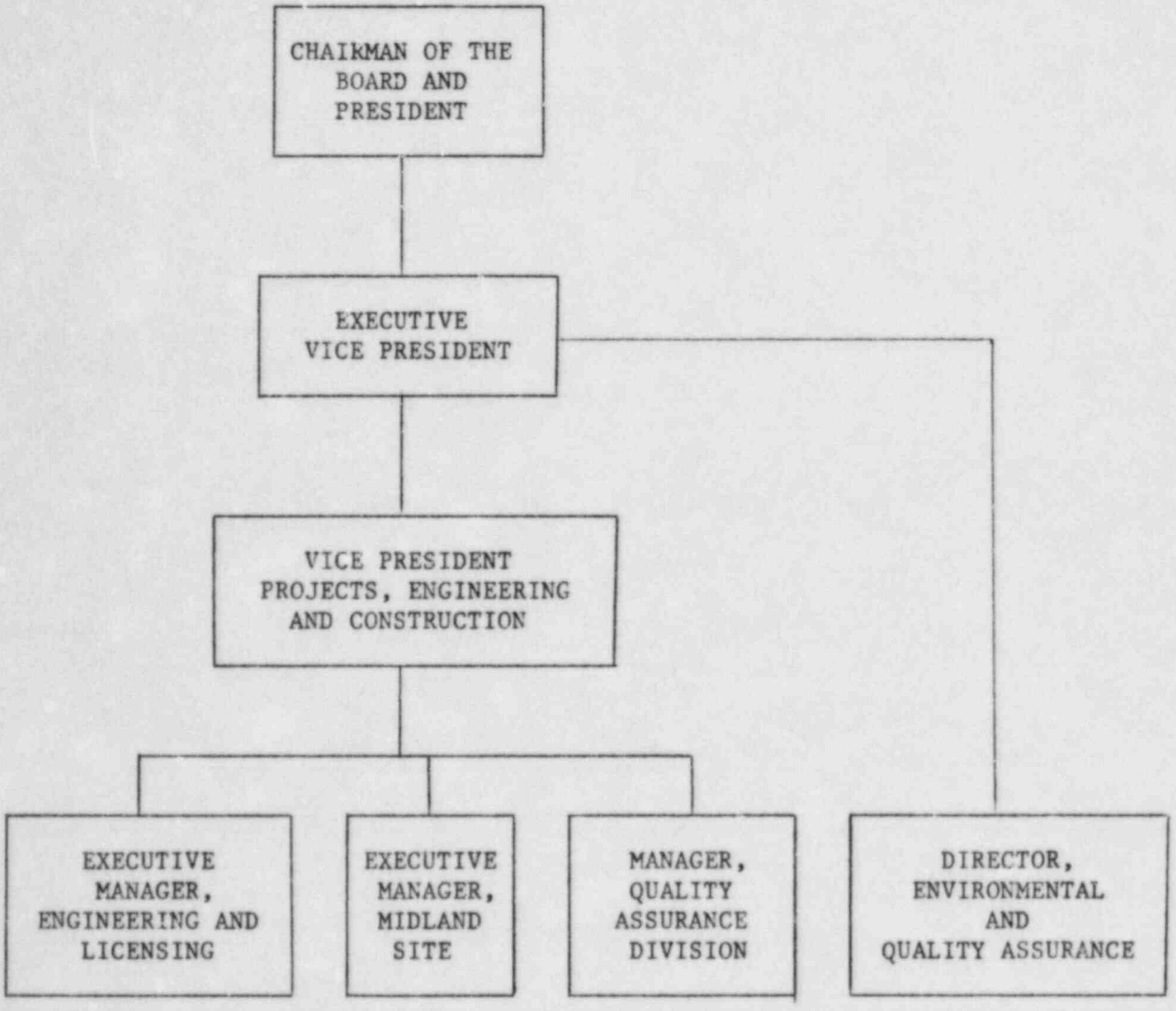
2.6 The reporting level of QAD provides organizational freedom, including sufficient independence from the cost and schedule impacts of QAD actions, and sufficient authority to:

a) identify quality problems,
b) initiate, recommend or provide solutions,
c) verify implementation of solutions, and
d) stop unsatisfactory work.

2.7 Differences over quality issues are resolved by the QAD and the organization responsible for the activity at the lowest level practical. If resolution cannot be reached, the issue is addressed by successive levels of management until the issue is resolved.

2.8 BPCo and B&WCC personnel are assigned to the QAD to overview activities related to ASME Code requirements.

ORGANIZATION



ATTACHMENT 1 - MIDLAND PROJECT ORGANIZATION

QUALITY ASSURANCE PROGRAM

1.0 POLICY

1.1 This QAPP establishes the control elements applicable to the shutdown phase. Activities affecting quality are accomplished by use of appropriate equipment and under suitable environmental conditions. Requirements for special controls, processes, equipment, tests, tools and personnel qualifications are established.

1.2 The Midland Project Organization periodically assesses the status, scope, adequacy and implementation of this QAPP. This assessment may be done through audits, reviews, analyses, meetings or reports.

2.0 PRACTICE

2.1 CPCo complies with the Federal Regulations, ANSI Standards and NRC Regulatory Guides identified in Attachment 1, with the exceptions, interpretations, and clarifications to those documents.

2.2 Engineering and Licensing is responsible for classifying structures, systems and components and maintaining the classification list (Q-List).

2.3 Design and procurement documents reflect the safety designation of the item or activity affected by the documents.

2.4 Managers responsible for activities which affect quality are trained, instructed or indoctrinated as appropriate to assure understanding of quality achievement, quality assurance functions and the corresponding interfaces.

2.5 Personnel performing quality-related activities are trained, indoctrinated or instructed to the level necessary to properly perform their assigned job responsibilities. Training may be by any method appropriate to the material being presented (eg, self-study, lecture, classroom, reading list, on-the-job training).

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

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

2.8 Personnel performing verification activities do not have direct responsibility for performing the work being verified except as identified in item 14 of Attachment 1 .

2.9 The QAD Manager's position description requires previous management experience, knowledge of quality assurance regulations, policies, practices and standards, and experience working in quality assurance or related activities in reactor design, construction, or operations, or in a similar high technology industry.

2.10 The qualifications of the Manager, QAD are at least equivalent to those described in Section 4.4.5 of ANSI/ANI-3.1, 1978 as endorsed by NRC Regulatory Guide 1.8.

QUALITY ASSURANCE PROGRAM

ATTACHMENT 1

This QAPP complies with the following Federal Regulations, ANSI Standards and regulatory positions of the NRC Regulatory Guides as modified by the exceptions and clarifications.

1. 10 CFR Part 21, Reporting of Defects and Noncompliance.

2. 10 CFR Part 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Facilities.

3. 10 CFR Part 50, Appendix A, General Design Criteria for Nuclear Power Plants.

4. 10 CFR Part 50.55(a), Codes and Standards.

5. 10 CFR Part 50.55(e), Reporting Significant Deficiencies.

6. NRC Regulatory Guide 1.26, (Revision 3, 2/76) - Quality Group Classification and Standards.

   Requirement

   Sections A and B.

   Exception/Interpretation

   There is a different usage of the term "important to safety" than that used elsewhere in the regulations and Regulatory Guides. The guide includes components which fall into quality group D under the definition of "important to safety", which implies that a quality assurance program in accordance with 10 CFR 50, Appendix B, should be applied. Quality assurance requirements are not applied to quality group D components. The definition of the term "important to safety", insofar as quality assurance is concerned, is considered to be that which appears in the introduction of Regulatory Guide 1.29.

7. NRC Regulatory Guide 1.28, (6/7/72) - Quality Assurance Program Requirements - Design and Construction, which endorses ANSI N45.2, 1971.

8. NRC Regulatory Guide 1.29, (Revision 3, 9/78) - Seismic Design Classification.

   a. Section C.2 Requirement

      Those portions of structures, systems, or components whose continued function is not required but whose failure could reduce the functioning of any plant feature . . . to an unacceptable safety level or could result in incapacitating injury to occupants of the control room should be designed and constructed so that the SSE would not cause such failure.

      Exception/Interpretation

      Portions of structures, systems, or components not designed as Seismic Category I whose failure could reduce the functioning of any safety-related component to an unacceptable level have been analyzed to ensure that such failure will not occur under seismic loading.

   b. Section C.4 Requirement

      The pertinent quality assurance requirements of Appendix B to 10 CFR Part 50 should be applied to all activities affecting the safety-related functions of those portions of structures, systems, and components covered under Regulatory Positions 2 and 3.

      Exception/Interpretation

      Quality assurance requirements of 10 CFR 50 Appendix B are not applied to components discussed in Section 2a above.

9. NRC Regulatory Guide 1.30, (8/11/72) - Quality Assurance Requirements for the Installation, Inspection and Testing of Instrumentation and Electrical Equipment, which endorses ANSI N45.2.4, 1972.

   Section C Requirement

   Requirements for the installation, inspection and testing of nuclear power plants instrumentation and electric equipment is included in ANSI N45.2.4, 1972.

Exception/Interpretation

American National Standards Institute (ANSI) N45.2.4-1972, Section 2.1, Planning - The required planning is frequently performed on a generic basis for application to many installations on one or more projects. This results in standard procedures or plans for installation, inspection, and testing which meet the requirements of the standard. Individual plans for each item or system are not normally prepared unless the work operations are unique. However, standard procedures or plans will be reviewed for applicability in each case. Installation plans or procedures are also limited in scope to those actions or activities which are essential to maintain or achieve required quality.

a. Section 2 - Requirement

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

Exception/Interpretation

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

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

b. Section 2.1 - Requirement

The cleanness and cleanness control activities shall be planned...

Exception/Interpretation

The required planning is frequently performed on a generic basis for application to many installations on one or more projects. This results in standard procedures or plans for installation and inspection and testing which meet the requirements of the standard. Individual plans for each item or system are not normally prepared unless the work operations are unique. However, standard procedures or plans will be reviewed for applicability in each case. Installation plans or procedures are also limited in scope to those actions or activities which are essential to maintain or achieve required

quality. This is consistent with Section II, Paragraphs 2 and 3 of ANSI N45.2-1971 which provide for examination, measurement, or testing to ensure quality or indirect control by monitoring of processing methods. However, final cleaning or flushing activities will be performed in accordance with procedures specific to the system.

c. Section 4 Requirement

Items should not be delivered to the point of installation site sooner than necessary unless the installed location is considered a better storage area.

Exception/Interpretation

Items are delivered to the installation site sooner than necessary and will be protected in accordance with Section 5 of ANSI N45.2.1.

d. Section 5 - Requirement

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

Exception/Interpretation

Other nonhalogenated material, compatible with the parent material, may be used since plastic film is subject to damage and does not always provide adequate protection.

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

11. NRC Regulatory Guide 1.38, (3/16/73) - Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water-Cooled Nuclear Power Plants, which endorses ANSI N45.2.2, 1972.

a. N45.2.2, General Requirement

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

Exception/Interpretation

Instead of classifying safety-related items into protection levels, controls over the packaging, shipping, handling and storage are established on a case-by-case basis with regard for the item's complexity, use and sensitivity to damage. Prior to installation or use, items are inspected and serviced as necessary to assure that no damage or deterioration exists which could affect their function. The classifications of ANSI N 45.2.2 are reviewed and used as a guide.

Section 2.7.4, Level D Classification - The last sentence, first paragraph is interpreted to read:

> These items require protection against the elements, airborne contamination, and physical damage as necessary and commensurate with the ultimate use of the item.

b. Section 3.9 and Appendix A 3.9 - Requirement

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

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

Exception/Interpretation

Identification of items is maintained either on the items, their storage areas or containers, or on records traceable to the items.

c. Section 5.2.2 - Requirement

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

Exception/Interpretation

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

d. Section 6.2.1 - Requirement

Access to storage areas shall be controlled and limited only to personnel designated by the responsible organization.

Exception/Interpretation

Access to storage areas for Levels A, B, and C is controlled by the individual(s) responsible for material storage.

Level D items may be stored in an area which has access control consistent with Zone IV of ANSI N45.2.3-1973. The areas are posted to limit access, but other positive control or guards may not be provided.

e. Section 6.2.2 - Requirement

The storage area shall be cleaned as required to avoid the accumulation of trash, discarded packaging materials and other detrimental soil.

Exception/Interpretation

Detrimental soil is defined as material or items which could degrade the stored material.

f. Section 6.2.4 - Requirement

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

Exception/Interpretation

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

g. Section 6.3.4 - Requirement

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

Exceptions/Interpretations

See b above.

h. Section 6.4.1 - Requirement

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

Exception/Interpretation

The requirement implies that all inspections and examinations of items in storage are to be performed on the same schedule. Inspections and examinations are performed and documented in accordance with procedures which identify the characteristics to be inspected and the inspection frequencies. These procedures recognize that inspections and frequencies needed vary from item to item.

i. Section 6.4.2 (5) - Requirement

Space heaters enclosed in electrical items shall be engaged.

Exception/Interpretation

Electrical items that have internal space heaters may not be energized if items are stored meeting the requirements of Paragraph 6.1.2(2) for Level B items, or scheduled maintenance or inspection (sampling) verifyies that degradation has not occurred.

j. Section 6.4.2 (6) - Requirement

Rotating electrical equipment shall be given insulation resistance tests on a scheduled basis.

Exception/Interpretation

Rotating electrical equipment rated at 50 hp and over will be given an insulation resistance test at the time of arrival at the jobsite and prior to turnover by construction to the owner. Rotating electrical equipment rated under 50 hp will be given an insulation resistance test if the required storage level has not been maintained or the operational reliability of the equipment is indeterminate.

k. Section 6.5 - Requirement

Items released from storage and placed in their final locations within the power plant shall be inspected and cared for in accordance with the requirements of Section 6 of this standard...

Exception/Interpretation

Items released and placed in staging areas or their final locations are inspected and cared for in accordance with the manufacturer's recommendations that specify the necessary steps to assure the item's reliability.

12. NRC Regulatory Guide 1.39, (3/16/73) - Housekeeping Requirements for Water-Cooled Nuclear Power Plants, which endorses ANSI N45.2.3, 1973.

    a. N45.2.3, Section 2.1 - Requirement

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

    Exception/Interpretation

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

    b. Section 2.2 - Requirement

    Requires procedures for safety and fire regulations.

    Exception/Interpretation

    CPCo will use procedures which describe existing national, state, and local codes and regulations to control safety and fire. The National Fire Protection Association Code is the national fire code followed at the site.

13. NRC Regulatory Guide 1.58, (Rev 1, 9/80) - Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel, which endorses ANSI N45.2.6, 1978.

QUALITY ASSURANCE PROGRAM

a. Section C.5 - Requirement

"In addition, the individual should be capable of reviewing and approving inspection, examination, and testing procedures and of evaluating the adequacy of such procedures to accomplish the inspection, examination, and test objectives."

Exception/Interpretation

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

b. Section C.6 - Requirement

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

Exception/Interpretation

The education and experience recommendations given in ANSI N45.2.6, Section 3.5 are treated as such, since certification is based upon these recommendations, and upon satisfactory demonstration of ability. Candidates are not required to be high school graduates or have earned the GED equivalent.

c. Section C.10 - Requirement

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

Exception/Interpretation

Objective evidence that demonstrates that an individual does have "comparable" or "equivalent" competence is maintained. However, this may take the form of documentation other than "procedures and records of written test" such as records of training, capability demonstrations and performance evaluations.

14. NRC Regulatory Guide 1.64, (Rev 1, 2/75) Quality Assurance Requirements for the Design of Nuclear Power Plants, which endorses ANSI N45.2.11, 1974.

    a. Section C.2 - Requirement

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

    Exception/Interpretation

    Due to the exceptional circumstances of the shutdown phase and minimal design activity, the designer's immediate supervisor can perform the verification.

15. NRC Regulatory Guide 1.74, (2/74) - Quality Assurance Terms and Definitions, which endorses ANSI N45.2.10, 1973.

    Definitions of terms provided in ANSI N45.2.10-1973 for Q-Listed activities are used with the following exceptions:

    Audit is defined as "A documented activity performed in accordance with written procedures or checklists to verify, by examination and evaluation of objective evidence, that applicable elements of a Quality Assurance Program have been developed, documented and effectively implemented in accordance with specified requirements. An audit does not include surveillance or inspection for the purpose of process control or product acceptance."

    Nonconformance is defined as "A deficiency in characteristic, documentation, or procedure which renders the quality of an item unacceptable or indeterminate. Examples include: "physical defects, test failures, incorrect or inadequate documentation, or deviation from prescribed processing, inspection or test procedures."

Procurement Documents are defined as "Purchase Requisitions (PRs), Purchase Orders (POs), Local Purchase Orders (LPOs), Returned Material Requests (RMRs), drawings, contracts, specifications, and instructions used to define requirements for the purchase of materials, equipment or services."

16. NRC Regulatory Guide 1.88, (8/74) - Collection, Storage and Maintenance of Nuclear Power Plants Quality Assurance Records, which endorses ANSI N45.2.9, 1974.

Section 5.6 of ANSI N45.2.9 - Requirement

The permanent record storage facility "structure, doors, frames, and hardware should be Class A fire-rated with a recommended four-hour minimum rating."

Exception/Interpretation

Permanent storage facilities have a two-hour fire rating. With this exception, the majority of records existing at the time of shutdown are maintained in accordance with ANSI N45.2.9 and in addition, records generated during the shutdown phase are maintained in accordance with ANSI N45.2.9.

During the shutdown phase documents, including a fraction of existing records, are being collected and placed in alternate storage facilities that do not meet ANSI N45.2.9. These documents may remain in these facilities or or be transferred to other locations which may not meet ANSI N45.2.9. Regardless of location, documents will be in secure areas and subject to appropriate action to minimize the possibility of loss due to vandalism, fire, or other modes of destruction. These documents may not be received, indexed, retrieved or otherwise processed to the degree that ANSI N45.2.9 requires.

17. NRC Regulatory Guide 1.94, (4/75) - Quality Assurance Requirements for Installation, Inspection and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants, which endorses ANSI N45.2.5, 1974.

18. NRC Regulatory Guide 1.116, (Revision O-R, 5/77) - Quality Assurance Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems, which endorses ANSI N45.2.8, 1975.

19. NRC Regulatory Guide 1.123, (Revision 1, 7/77) - Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants which endorses ANSI N45.2.13, 1976.

20. NRC Regulatory Guide 1.144 (Revision 1, September 1980) - Auditing of Quality Assurance Programs for Nuclear Power Plants which endorses ANSI N45.2.12, 1977.

21. NRC Regulatory Guide 1.146, (8/80) - Qualification of Quality Assurance Program Audit Personnel for Nuclear Facilities, which endorses ANSI N45.2.23, 1978.

DESIGN CONTROL

1.0 POLICY

The design organizations identify the applicable regulatory requirements, design bases, codes and standards; develop the design and specify the design interfaces; perform design verification and prepare design documents.

2.0 PRACTICE

2.1 CPCo has overall responsiblity for design activities conducted for the Midland Energy Center. The Executive Manager, Engineering and Licensing is assigned direct responsibility for conducting and contracting design activities and coordinating design activities among CPCo and non-CPCo organizational units.

2.2 Each design organization prepares instructions for controlling its own design activities.

2.3 Design documents in existence at the time of shutdown will be used for shutdown activities. Technical direction which may modify (eg, change, complete, replace) design documents will be issued by the responsible design organization in a controlled fashion. However, the original design documents will not necessarily be further processed to reflect corrections, improvements, clarifications or plant status. The technical direction issued will be documented in a manner which preserves the option of later revising the design documents.

PROCUREMENT DOCUMENT CONTROL

1.0 POLICY

1.1 Procurement documents specify the items to be procured, the technical criteria including codes, standards and regulations and Quality Assurance Program requirements.

1.2 Supplier selection is described in Policy 7, CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES.

2.0 PRACTICE

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

a) scope of work to be performed;

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

c) regulatory, administrative and reporting requirements;

d) quality requirements appropriate to the complexity and scope of the work, including necessary tests and inspections;

e) a requirement for a documented QA Program, subject to QAD review and written concurrence prior to the start of work;

f) a requirement for the supplier to invoke applicable quality requirements on subtier suppliers;

g) provisions for access to supplier and subtier suppliers' facilities and records for inspections, surveillances and audits;

h) identification of documentation to be provided by the supplier, identification of documents to be compatible with the CPCo System, the schedule of submittals, and identification of documents requiring CPCo approval.

PROCUREMENT DOCUMENT CONTROL

2.2 The appropriate Midland Project department coordinates procurement planning and the preparation of the required procurement documents and obtains approval of the appropriate departments, including QAD prior to forwarding the request for purchase to the Purchasing Department.

2.3 QAD performs and documents reviews of quality-related procurement packages to assure that quality requirements (see Paragraph 2.1) are correctly stated, inspectable, and controllable. These reviews also assure that procurement documents have been prepared, reviewed and approved in accordance with this QAPP.

2.4 Changes to the technical or quality requirements in procurement documents are reviewed and approved by the same organizations that approved the original procurement request packages or by other organizations as designated by CPCo.

INSTRUCTIONS, PROCEDURES AND DRAWINGS

1.0 POLICY

1.1 Activities affecting quality are accomplished in accordance with documented instructions.

1.2 Instructions include quantitative and qualitative acceptance criteria.

1.3 Instructions describe the activities to be accomplished.

2.0 PRACTICE

2.1 Instructions may take the form of procedures, specifications, plans, checklists, manuals, drawings, or other documents.

2.2 Departments, suppliers and contractors prepare the required instructions prior to initiation of the activities.

2.3 Midland Project organizations prepare and maintain procedures as necessary to:

a) provide instructions for administrative control and technical support;

b) provide the basis for a consistent method of of performing recurring quality-related activities;

c) control the interfaces between CPCo and its suppliers.

2.4 Quality related Midland Project Organization instructions are reviewed by QAD to assure compliance with this QAPP.

2.5 The Manager, QAD formulates the QAPP, coordinates and acquires the approval of this QAPP by the Executive Vice President, the Vice President - Projects Engineering and Construction, and the Director, E&QA.

2.6 Changes to the QAPP which reduce the level of commitment previously accepted by the NRC are submitted to the NRC for review and acceptance prior to implementation. Other changes are submitted to the NRC within 90 days of the change.

DOCUMENT CONTROL

1.0 POLICY

1.1 Documents which prescribe activities affecting quality, including instructions and procedures, are prepared, reviewed, issued, and controlled according to written procedures.

1.2 Measures are included to assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed according to a controlled distribution to the user functions.

2.0 PRACTICE

2.1 Controlled documents include:

a) design documents;

b) quality related procurement documents;

c) instructions for such activities as maintenance, storage and inspection of safety related systems, structures and equipment;

d) QAPP and Departmental procedures;

e) nonconformance type reports.

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

a) establishment of criteria to assure that adequate technical and quality requirements are incorporated;

b) identification of the organizations responsible for review, approval, issue and revision;

c) performance and documentation of a review by QAD;

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

DOCUMENT CONTROL

2.3 Documents are controlled so that:

a) the applicable documents are identified and available to the user prior to commencing work;

b) obsolete or superseded documents are identified to preclude unauthorized and inadvertent use.

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

CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

1.0 POLICY

1.1 Activities that implement approved procurement requests for material, equipment and services are controlled to assure conformance with procurement document requirements.

1.2 Purchased material, equipment and services are controlled by a system of supplier evaluation and selection, source and receipt inspection, examination and acceptance of items and documents upon delivery, and periodic assessment of performance.

1.3 Objective evidence of quality that reflects the quality status is maintained.

1.4 For commercial off-the-shelf items where it is impractical for a supplier to provide a quality assurance program, assurance of acceptability will be established by source or receipt inspection.

2.0 PRACTICE

2.1 The appropriate Midland Project Organization and QAD qualifies suppliers by performing a documented evaluation of their capability to provide materials, equipment or services as specified by procurement documents.

2.2 To remain qualified, suppliers involved in active procurements are reevaluated annually and are audited triennially by QAD. If a Licensee Contractor and Vendor Inspection Program letter of confirmation or the Coordinating Agency for Supplier Evaluation Register is used to establish the qualifications of the Supplier, the documentation identifies the letter or the audit used. Evaluation of suppliers holding applicable ASME Certificates of Authorization is done by reference to the current ASME listing of certificate holders.

2.3 Quality assurance evaluations are performed using historical performance data, source surveys or industry recognized source qualification programs (eg, ASME nuclear certification programs, Nuclear Regulatory Commission Licensing Contractor and Vendor Inspection Program and the Coordinating Agency for Supplier Evaluation).

CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

2.4 Supplier evaluation and triennial audits are not necessary when:

a) the material, equipment or service is relatively standard in design, manufacture and test, and

b) the acceptability of the material, equipment or service can be established by inspections or tests of the end product without adversely affecting the integrity, function or cleanliness.

2.5 QAD assesses supplier performance by audit, surveillance or inspection to verify that processes and products are in accordance with the procurement documents.

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

a) specifications, codes and standards referenced in procurement documents for spare or replacement items are at least equivalent to those for the original items;

b) parts intended as spares or replacements for "off-the-shelf" items, or other items for which criteria were not originally specified, are evaluated for performance at least equivalent to the original;

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

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

2.7 QAD performs receipt inspections to verify that items are undamaged and properly identified, that they conform to procurement requirements not previously verified by source inspection, and that required supplier furnished documentation is available prior to use. Items inspected are identified as to their acceptance status prior to their storage or use.

CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

2.8 Procurement documents identify the applicable documentation suppliers are required to furnish. This documentation is reviewed and accepted by the appropriate Midland Project organization and QAD. Such documentation includes:

a) drawings, reports, certificates, or similar documents that identify the purchased item and the requirements met by the item;

b) documentation identifying any procurement requirements that have not been met;

c) a description of those nonconformances dispositioned "accept as is" or "repair"; and

d) quality assurance records as specified in the procurement requirements.

2.9 QAD periodically evaluates supplier's certificates of conformance by audits, independent inspections or tests to assure that they are valid. The results of these evaluations are documented.

IDENTIFICATION AND CONTROL OF MATERIALS, PARTS AND COMPONENTS

1.0 POLICY

Materials, parts and components (items) are identified and controlled to preclude incorrect application or the use of defective items.

2.0 PRACTICE

2.1 Controls (eg, procedures) are established that provide for the identification and control of materials (including consumables), parts and components (including partially fabricated assemblies).

2.2 Identification of items is maintained either on the items, their storage areas or containers, or the items are traceable to the applicable documentation, eg:

a) drawings,
b) specifications,
c) purchase orders,
d) certificates,
e) inspection reports,
f) test Reports,
g) deviation reports.

2.3 The method of identification assures that the item is not damaged.

2.4 The method of tracing assures that the correct item is used and acceptability status is known.

2.5 Identification is verified and documented prior to release for use.

CONTROL OF SPECIAL PROCESSES

1.0 POLICY

1.1 Special processes are those for which verification of conformance by direct inspection, examination or testing is impossible or impractical. Special processes are:

a) welding,
b) heat treating,
c) chemical cleaning,
d) application of protective coatings,
e) application of class F fireproofing,
f) concrete placement, and
g) non-destructive examination.

1.2 Special processes are controlled by a system of procedure qualification, equipment qualification, personnel qualification, and overview by the QAD.

2.0 PRACTICE

2.1 The organization responsible for performing special processes is responsible for preparing and controlling special process procedures.

2.2 Special process procedures identify the inprocess data to be recorded to demonstrate acceptable completion of the special process.

2.3 Qualification techniques are in conformance with applicable codes, standards and specifications and are specified to suit the special process being qualified. Consideration is given to:

a) procedure review,
b) pilot demonstration,
c) preparation of samples,
d) destructive and non-destructive examinations,
e) physical and chemical tests,
f) measurement of inprocess parameters,
g) personnel examinations,
h) capability demonstrations,
i) performance evaluations,
j) process equipment or personnel limitations,
k) intervals for re-qualification, and
l) documentation.

CONTROL OF SPECIAL PROCESSES

2.4 QAD overviews special process and associated qualification activities using techniques appropriate to the circumstances. Consideration is given to:

a) inprocess audits,
b) alternate or duplicate inspections, examinations or tests, and
c) review of documentation.

INSPECTION

1.0 POLICY

1.1 Inspections apply to activities and hardware which are amenable to physical verification. Inspection is normally applied to manufacturing, construction, testing and maintenance activities.

1.2 Inspections are performed by qualified inspectors using written inspection plans.

2.0 PRACTICE

2.1 QAD is responsible for inspection. QAD may delegate inspection to suppliers through procurement documents and to other organizations, subject to QAD establishing acceptability of:

a) inspection procedures,
b) personnel qualification criteria,
c) organizational independence, and
d) independence from undue pressure, such as cost and schedule.

2.2 Instructions are established for the preparation of inspection plans. Inspection plans address:

a) attributes to be inspected,

b) inspection methods,

c) acceptance criteria,

d) specification of measuring and test equipment having the necessary accuracy,

e) inspector identification,

f) recording, evaluating and determining acceptability of the inspection results,

g) the time of inspection,

i) the need for "hold" or "witness" points,

j) the level of capability of inspection personnel, and

k) identification of appropriate procedures, drawings, specifications and their revisions.

INSPECTION

2.3 Instructions are established for certification of inspection and non-destructive examination personnel. The certification process addresses:

a) education,
b) experience,
c) training,
d) examinations,
e) capability demonstrations, and
f) documentation.

TEST CONTROL

1.0 POLICY

Testing may be done as part of a maintenance activity for the purpose of measuring and assessing status of an item, but not for the purpose of establishing the acceptability or capability of equipment and systems.

2.0 PRACTICE

Instructions are established for the performance of tests as part of maintenance activities. Instructions address:

a) instructions for performing the test,

b) acceptance criteria,

c) prerequisites,

d) hold and witness points,

e) provisions for verifying the test prerequisites have been met, and

f) recording, evaluating and determining acceptability of the test data and results.

CONTROL OF MEASURING AND TEST EQUIPMENT

1.0 POLICY

Measuring and test equipment used to establish conformance to criteria are identified, controlled, calibrated and adjusted to maintain accuracy.

2.0 PRACTICE

2.1 The organization doing the measuring or testing is responsible for using identified, controlled and calibrated equipment.

2.2 Instructions are established to address:

a) calibration technique and frequency;
b) equipment identification, maintenance and control;
c) traceability to the calibration source;
d) use of reference, secondary and calibration standards;
e) calibration basis when standards do not exist.

2.3 Measuring and test equipment is uniquely identified and is traceable to its calibration test data.

2.4 Where practical, labels are attached to measuring and test equipment to identify the next calibration due date. Where labels are not attached, a control system is used that identifies the calibration due date.

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

2.6 Where practical, reference standards that have at least four times the required accuracy of the item being calibrated are used to calibrate secondary standards. Where this accuracy is not obtained, these standards shall have an accuracy that assures that the equipment being calibrated will be within required tolerance. In such cases the basis and authority for acceptance is documented.

CONTROL OF MEASURING AND TEST EQUIPMENT

2.7 Secondary standards normally will have greater accuracy than equipment being calibrated. Standards with the same accuracy may be used when shown to be adequate for specific calibration requirements. The basis and authority for this acceptance is documented.

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

HANDLING, STORAGE AND SHIPPING

1.0 POLICY

Provisions for handling, storage and shipping are established to:

a) detect damage, contamination and deterioration;

b) prevent damage, contamination and deterioration from progressing to a point which precludes the future use of the item for its intended purpose.

2.0 PRACTICE

The organizations responsible for handling, shipping and storage are responsible for the preparation of instructions. Instructions consider:

a) cleaning process and cleanliness levels,
b) packaging and preservation techniques,
c) environmental controls,
d) handling procedures and equipment,
e) shipping methods,
f) personnel training,
g) storage methods and facilities,
h) shelf life,
i) maintenance,
j) material identification,
k) the need for periodic lubrication and cycling,
l) desiccants,
m) inspection requirements.

INSPECTION, TEST AND OPERATING STATUS

1.0 POLICY

1.1 The status of inspections done prior to and during the Shutdown phase is reflected by the inspection records. Markings and tags placed prior to the shutdown phase to reflect inspection or acceptance status will be maintained only when necessary to support shutdown activities. Status markings and tags are placed during Shutdown only if necessary to support Shutdown activities.

1.2 The status of plant testing done prior to the Shutdown phase is reflected by the records. Further plant testing is not included in the Shutdown phase. Markings and tags placed prior to the Shutdown phase to reflect test status will not be maintained.

1.3 Operating status is controlled by a system of instructions and authorizations.

2.0 PRACTICE

2.1 QAD prepares instructions for inspection and acceptance statusing, which address:

a) the means of statusing material received and stored without inspection;

b) the need for nonconformance tagging and the controls for application and removal of such tags;

c) the sequencing of inspections, including altering the sequence;

d) maintenance of status indicators when necessary to support Shutdown activities.

2.2 Site Management prepares instructions for controlling operating status, which consider:

a) means for establishing and identifying operating status;

b) procedure and authority for changing operating status;

c) sequencing of maintenance activities including altering the sequence, to account for operating status;

d) prevention of inadvertent use.

NONCONFORMING ITEMS

1.0 POLICY

1.1 Materials, parts or components that do not conform to requirements are controlled in order to prevent their inadvertent use. Nonconformances are identified, documented and the documentation maintained as records. Nonconformance type reports existing prior to and generated during the shutdown phase will be further processed only if necessary to support shutdown activities.

1.2 When nonconformance type reports are further processed, provisions are established for notifying affected organizations; tagging segregating or otherwise controlling items; and dispositioning, releasing and closing the nonconformance.

2.0 PRACTICE

2.1 Nonconformances are controlled by a system of documentation, notification, release, dispositioning and closure measures. QAD manages this system. Other organizations implement assigned activities within this system.

2.2 The QAD establishes instructions to control nonconformances, which consider:

a) identification and documentation;

b) marking, tagging, segregating or otherwise controlling nonconforming items;

c) the authorities and responsibilities for dispositioning, review, release, acceptance and closure of nonconformances.

2.3 QAD analyzes nonconformance reports and identifies trends.

2.4 Documentation identifies the nonconforming item; describes the nonconformances and the disposition of the nonconformance, and includes signature approval of the disposition.

2.5 Reworked, repaired, and replacement items are inspected and tested in accordance with the original inspection and test requirements or acceptable alternatives.

CORRECTIVE ACTION

1.0 POLICY

1.1 Conditions adverse to quality, eg. failures, malfunctions, deficiencies, nonconformances, defective material and equipment are identified and documented.

1.2 Significant conditions adverse to quality are analyzed for corrective action, only if necessary to support shutdown activities.

2.0 PRACTICE

2.1 Corrective actions include:

a) determining the cause,

b) determining the extent of the condition,

c) implementing action to preclude similar problems in the future.

2.2 Significant conditions adverse to quality, the cause and any corrective action taken is documented and reported to appropriate levels of management.

2.3 The implementing organization is responsible for completing the corrective action in a manner consistent with shutdown activities.

2.4 QAD verifies and documents verification of implementation of the corrective action.

2.5 QAD participates in the determination of the adequacy of corrective action.

QUALITY ASSURANCE RECORDS

1.0 POLICY

1.1 Provisions to control records are established.

1.2 Records are controlled in accordance with NRC Regulatory Guide 1.88 with the exceptions noted in Policy 2.

2.0 PRACTICE

2.1 Documents classified as records include:

a) maintenance records,
b) results of reviews,
c) inspection reports,
d) test reports,
e) audit reports,
f) material analyses,
g) monitors of work performance,
h) qualification of procedures,
i) qualification of personnel,
j) qualification of equipment,
k) calibration procedures and reports,
l) nonconformance reports,
m) corrective action reports,
n) drawings and specifications, and
o) procurement documents.

2.2 Instructions for controlling records are prepared. These instructions consider:

a) record identification,
b) assigned responsibilities,
c) record storage location,
d) duration of record retention, and
e) Record retrieval to support shutdown activities.

2.3 Inspection records contain the following where applicable:

a) a description of the type of observation,
b) the date and results of inspection or test,
c) information related to conditions adverse to quality,
d) inspector or data recorder identified, and
e) evidence as to the acceptability of results.

AUDITS

1.0 POLICY

1.1 Provisions for a system of planned audits are established. These audits verify compliance with and determine the effectiveness of the quality assurance program.

1.2 Audits are performed to written instructions by qualified personnel not having direct responsibilities in the areas being audited.

1.3 Audit results are documented and are reviewed by management.

1.4 Follow-up action is taken to correct deficiencies.

2.0 PRACTICE

2.1 QAD is responsible for preparing and implementing an audit plan. The audit plan describes:

a) the audits to be performed,
b) frequency of audits,
c) audit schedules.

2.2 The audit schedule considers:

a) significance of the activity to safety;
b) timing, to assure effective procurement, maintenance and storage activities.

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

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

2.5 Audit data are analyzed by QAD. The resulting report identifies any quality deficiencies and assesses the effectiveness of the QA Program. The reports are distributed to the responsible management of both the audited and auditing organizations.

2.6 The audited organization identifies and takes corrective action in accordance with Policy 16. Follow-up is performed to assure that the appropriate corrective action is taken and is effective. Such follow-up includes reaudits when necessary.

PROGRAM REPORTING

1.0 POLICY

Provisions for reporting nonconforming conditions under 10 CFR 50.55(e) and 10 CFR 21 are established.

2.0 PRACTICE

2.1 QAD is responsible for:

a) determining reportability,
b) orally notifying the USNRC,
c) documenting the notification.

2.2 Further reporting and dispositioning are done only if necessary to support shutdown activities. The Vice President, Projects, Engineering and Construction is responsible for submitting written reports, when written reports are made.

2.3 Conditions and related corrective actions which were reported under 10 CFR 50.55(e) or 10 CFR 21 prior to the shutdown of the Midland Energy Center will be dispositioned and completed only if necessary to support Shutdown Phase activities.