

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

February 27, 2003

United States Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D. C. 20555-0001

Serial No. 02-735  
NL&OS/SLW R1  
Docket Nos. 50-280, 281  
50-338, 339  
72-2, 16  
License Nos. DPR-32, 37  
NPF-4, 7  
SNM-2501,  
2507

Gentlemen:

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**SURRY AND NORTH ANNA POWER STATIONS UNITS 1 AND 2**  
**OPERATIONAL QUALITY ASSURANCE PROGRAM**  
**INSPECTION PROGRAM CHANGES AND CLARIFICATIONS**

In accordance with 10 CFR 50.54(a)(4), Virginia Electric and Power Company (Dominion) is submitting a revision to the Operational Quality Assurance Program (Topical Report) for your review and approval. The program changes and clarifications have been developed from audit, self-assessment and independent assessment recommendations. Because some of the changes and clarifications are not clearly within the currently approved QA Topical Report description, we are submitting the entire change as a reduction in commitment for review and approval. A discussion of the proposed Operational Quality Assurance program change is provided in Attachment 1. The proposed change is provided as a mark-up in Attachment 2 and a typed version in Attachment 3.

Please contact us if you have any questions or require additional information.

Very truly yours,



David A. Christian  
Senior Vice President and Chief Nuclear Officer

Q004

Commitments made in this letter:

1. There are no commitments made in this letter.

Attachments:

1. Discussion of Change
2. Mark-Up of Topical Report
3. Proposed Topical Report

cc:

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**Attachment 1**

**Discussion of Change**

**Dominion  
Surry and North Anna Power Stations  
Units 1 and 2**

## DISCUSSION OF CHANGE

### **1.0 Introduction and Background**

Pursuant to 10 CFR 50.54(a)(4), Virginia Electric and Power Company (Dominion) requests review and approval of the below changes and clarifications to the inspection program as described in the Operational Quality Assurance Program (Topical Report) for the North Anna and Surry Power Stations. The program changes and clarifications have been developed from audit, self-assessment and independent assessment recommendations. Because some of the changes and clarifications are not clearly within the currently approved QA Topical Report description, we are submitting the entire change as a reduction in commitment for review and approval. Many of the requested changes have been approved for other utilities and the applicable documents are referenced in Section 3, "Applicable Regulatory Requirements/Criteria".

### **2.0 Discussion of Change**

The QA Topical Report is being revised to incorporate the following changes (refer to Attachment 2 for a mark-up of the Topical Report Sections with the specific item numbers below noted);

1. Establish an Administrative Level III (Quality Inspection Coordinator (QIC), Supervisor Material Verification) to perform Level III functions for maintenance and modifications, material verification and vendor surveillance inspections. Exception is taken to hands-on experience and inspection function and specific education and experience requirements are provided. The Administrative Level III will administer the program and a Discipline Level III or a qualified engineer will perform technical changes to the training and inspection program. (Topical Sections 17.2.2.6, 17.2.2.8 and Table 17.2-0, Regulatory Guide 1.58)
2. Take exception to Regulatory Guide 1.58 requirement for General Education Development (GED) or High School (HS) diploma for inspection personnel. (Topical Report Table 17.2-0, Regulatory Guide 1.58)
3. The Topical Report will be revised to include a clear definition of routine and non-routine maintenance. The QIC will be involved in determining what is routine vs. non-routine. The Topical Report will be clarified as to the applicability of the Regulatory Guides and standards for maintenance and modification inspections. (Topical Report Section 17.2.10, Table 17.2-0 introduction and Regulatory Guide 1.33)

4. Clarification of the Topical Report commitments to the Regulatory Guides and standards will be made noting how the interpretation and implementation of the required inspections are as determined by a qualified engineer or a Discipline Level III inspector. (Topical Report Table 17.2-0, Regulatory Guides 1.30, 1.94 and 1.116)
5. Remove from the Topical Report the requirements for performing inspections consistent with original inspection requirements. (Topical Report Table 17.2-0 introduction)
6. The requirement for random inspections and initiating a surveillance program will be deleted from the Topical Report. (Topical Report Sections 17.2.8, 17.2.10 and 17.2.16)
7. The Topical Report will be reworded to address the issue of Station Nuclear Safety and Operating Committee (SNSOC) approval of procedures for rework or repair of safety-related equipment. (Topical Report Section 17.2.16)
8. Clarify in the Topical Report how procedural guidance will be provided for implementation of the inspection program and for hold point inspections. (Topical Section 17.2.9, 17.2.10, 17.2.16)
9. Clarify that the ANSI N18.7 requirement to have approved procedures may be implemented per approved Maintenance procedures in lieu of inspection procedures. (Topical Report Section 17.2.10, Topical Report Table 17.2-0, Regulatory Guide 1.33)
10. The Topical Report statement "Maintenance and modification inspection activities ensure that current procedures are used to accomplish work" will be modified to note that it is the worker who has the responsibility to ensure they have the correct revision of the procedure. (Topical Report Section 17.2.6 )
11. Clarify which personnel have the authority to stop work. (Topical Report Section 17.2 16.1, 17.2.16.2)
12. The Topical Report will be clarified as to the commitment to Regulatory Guide 1.54 and ANSI N101.4 as referenced in ANSI N18.7. (Topical Report Table 17.2-0, Regulatory Guide 1.33)

The changes are being made to make the QA Topical Report more clearly and appropriately state the current inspection practices, or as in the case of the Administrative Level III, to provide for an alternative means of meeting the regulatory requirements.

### 3.0 Applicable Regulatory Requirements/Criteria

For each of the above Topical Report change items, a review of the current commitments and applicable regulatory requirements will be performed.

1. Establish an Administrative Level III (Quality Inspection Coordinator, Supervisor Material Verification) to perform Level III functions for maintenance and modifications, material verification and vendor surveillance inspections.

Dominion is committed to Regulatory Guide 1.58, "Qualification of Nuclear Power Plant Inspection and Testing Personnel" (Rev. 1, 9/80) which endorses ANSI N45.2.6-1978. A clarification to this RG was previously made in Topical Report Table 17.2-0 which states; "With regard to Section 3.1 of ANSI N45.2.6-1978, titled General: The Company will implement the requirements of this Section with the stipulation that, Level III inspectors are not a specific requirement of the Company's inspection program". When this change was issued it was not considered a reduction in commitment but there was not enough guidance provided as to how we continued to meet the intent of the standard. The new wording is intended to clarify how we implement the intent of the standard. A similar exception has been approved for Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS). 10CFR50.54 paragraph (a)(3)(ii) specifies that licensees may use a QA alternative or exception previously approved by the NRC in a safety evaluation provided the bases of the NRC approval is applicable to the licensee's facility. Prior to 1997 the approval letters for QA program changes did not elaborate on the rationale for accepting changes. Therefore, although this exception has been approved for PVNGS, Dominion will submit this exception for prior approval. PVNGS FSAR Section 1.8, "Conformance to NRC Regulatory Guides", contains the following approved exception to Regulatory Guide 1.58, ANSI N45.2.6-1978.

*"The first sentence of paragraph 3.4 states that a level III qualified person shall have all the capabilities of a Level II qualified person for the inspection, examination or test category or class in question. APS will qualify Level III persons without the actual hands on experience and capability to perform specific inspections, examinations or tests required of a Level I or II qualified person, and utilize these persons for administrative and supervisory functions including certifying persons at the same or lower level."*

The technical functions of evaluation of the acceptability of the Inspection Program and evaluating the adequacy of the training program will continue to be functions of a Discipline Level III or a qualified engineer (meeting the requirements for an Engineer in Charge as described in ANSI 3.1). The use of a qualified engineer in place of a Level III was previously approved for D.

C. Cook Nuclear Plant. Indiana & Michigan Electric Company (I&MECo) submitted a July 1984 version of the FSAR for D.C. Cook Nuclear Plant, Units 1 and 2, docket numbers 50-315 and 50-316 to the NRC on July 20, 1984 and October 16, 1984. The NRC subsequently approved the July 1984 FSAR update in a letter dated January 9, 1985. The July 1984 update contained the following exception to Regulatory Guide 1.58 Sections C5, C6, C7, C8, C10.

*"I&MECo takes the position that the classification of inspection, examination and test personnel (inspection personnel) into "Levels" based on the requirements stated in section 3.0 of ANSI N45.2.6 does not necessarily assure adequate inspection capability. I&MECo maintains that department and first line supervisors are best able to judge the inspection capabilities of the personnel under their supervision, and that "level" classification would require a overly burdensome administrative work load, could inhibit inspection activities, and provides no assurance of inspection capabilities. Therefore, I&MECo does not implement the "level classification" concept for inspection, examination, and test personnel.*

*The methodology under which inspections, examinations and tests are conducted at the D.C. Cook Nuclear Plant requires the involvement of first line supervisors, engineering personnel, departmental supervisors, and plant management. In essence, the last seven (7) project functions shown in Table 1 to ANSI N45.2.6 are assigned to supervisory and engineering personnel and not to personnel of the inspector category. These management supervisory and engineering personnel, as a minimum, meet the education and experience requirements of "Level II and Level III" personnel, as required, to meet the criteria of ANSI 18.1 which exceeds those of ANSI N45.2.6. In I&MECo's opinion, no useful purpose is served by classification of management, supervisory, and engineering personnel into "Levels".*

*Therefore, I&MECo takes the following positions relative to regulatory positions C5, 6, 7, 8, and 10 of Regulatory Guide 1.58.*

- C-5 Based on the discussion in B.1 above, this position is not applicable to the Donald C. Cook Nuclear Plant.*
- C-6 Replacement personnel for Donald C. Cook Nuclear Plant management, supervisor, and engineering positions, subject to ANSI 18.1 will meet the education and experience requirements of ANSI 18.1 and therefore those of ANSI N45.2.6. Replacement inspection personnel will, as a minimum, meet the education and experience requirements of ANSI N45.2.6, Section 3.5.1 – "Level I."*
- C-7 I&MECo, as a general practice, complies with the training recommendations as set forth in this regulatory position.*
- C-8 All I&MECo inspection, examination and test personnel are instructed, in the normal course of employee training, in radiation protection and the means to minimize radiation dose exposure.*

C-10 *I&MECo maintains documentation to show that inspection personnel meet the minimum requirements of "Level I" and management, supervisor, and engineering personnel meet the minimum requirements of ANSI 18.1."*

Dominion is committed to Regulatory Guide 1.8 (Endorses ANSI/ANS 3.1 (Draft 12/79)) for personnel qualification and training instead of the referenced ANSI 18.1. A comparison between the requirements for an Engineer in Charge in the ANSI 18.1 (The engineer in charge shall have a minimum of a Bachelor's Degree in Engineering or the Physical Sciences and have a minimum of three years of professional level experience in nuclear services, nuclear plant operation, or nuclear engineering, and the necessary overall nuclear background to determine when to call consultants and contractors for dealing with complex problems beyond the scope of the owner-organization expertise.) to the requirements in ANSI 3.1 (Education: Bachelor's Degree in Engineering or related sciences Experience: Six years of professional level experience in nuclear services, nuclear plant operation, or nuclear engineering, and the necessary overall nuclear background to determine when to call consultants and contractors for dealing with complex problems beyond the scope of the owner-organization expertise. Training: As required by Section 5.3.1) shows that the requirement in our current program for an Engineer in Charge exceed the requirements imposed by the D.C. Cook exception for the use of Engineering personnel to perform Level III functions.

2. Exception to Regulatory Guide 1.58 requirement for GED or HS diploma for inspection personnel.

In accordance with 10CFR50.54 paragraph (a)(3)(ii) Dominion would like to incorporate a previously approved exception to the Regulatory Guide 1.58 (Rev.1, 9/80) Position C.6 requirement for an inspector to be a high school graduate or have a GED. Palisades Nuclear Plant has taken the following exception to the RG Position C.6 as documented in "Quality Program Description for Nuclear Plants (Part 2) – Palisades Nuclear Power Plant (CPC-2A)".

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

Dominion will continue to utilize the requirements of ANSI N45.2.6 for education and experience as a guide but will consider certification of personnel not having a high school diploma or having earned the GED equivalent upon satisfactory completion of capability testing.

3. Definition of routine and non-routine maintenance and the applicability of the Regulatory Guides and standards for maintenance and modification inspections.

Dominion is committed to Regulatory Guide 1.33, "Quality Assurance Requirements (Operational)(Rev.2, 2/78)", which endorses ANSI N18.7-1976. ANSI N18.7 Section 5.2.7 lists standards which it says contain useful guidance concerning design and construction related activities associated with modifications that shall be applied to those activities occurring during the operational phase that are comparable in nature and extent to related activities occurring during initial plant design and construction. A clarification is being added to the Topical Report stating that for non-routine maintenance and modification work activities on safety-related components, the following Regulatory Guides and ANSI standards will be utilized for determining inspection hold points as determined by a discipline Level III or qualified engineer, with clarifications as noted in Table 17.2-0; Reg. Guide 1.30 (N45.2.4-1972), Reg. Guide 1.94 (N45-2.5-1974), Reg. Guide 1.116 (N45.2.8-1975) and Reg. Guide 1.54 (N101.4-1972). Non-routine maintenance is defined as maintenance, which is both infrequently performed (once in the life of the plant) and requires special procedures. The QIC will determine if a maintenance procedure, for infrequently performed maintenance, is to be considered non-routine for establishing hold points. Inspection hold points for routine maintenance will be placed in technical procedures where necessary to assure quality. Routine maintenance is defined as maintenance activities required to preserve or restore plant systems, structures, and components to their approved design configuration. For safety related welding and civil activities (concrete, grout, soils, coatings & structural steel) inspections will be conducted as required by the applicable codes and standards. Inspections for routine maintenance may be conducted by peer inspections using independent or simultaneous verification, or by qualified inspection personnel. The determination of these inspection hold points and the type of inspection to be performed will be based on Engineering Specifications or other Engineering documents (Installation Specifications, Corporate Weld Manual, Engineering Transmittal etc.) The Quality Inspection Coordinator, Engineering, or Management may request additional hold points.

4. Interpretation and implementation of the commitments to the Regulatory Guides and standards for inspections are as determined by a qualified engineer or a Discipline Level III.

Dominion is committed to the Regulatory Guides and Standards listed in Topical Report Table 17.2-0. For non-routine maintenance and modification inspections, the following standards are used to establish hold points; Reg. Guide 1.30 (N45.2.4-1972), Reg. Guide 1.94 (N45-2.5-1974), Reg. Guide 1.116 (N45.2.8-1975) and Reg. Guide 1.54 (N101.4). The current Topical Report Table 17.2-0 contains the following clarification under Reg. Guide 1.30 (N45.2.4-1972) Section 5.1. Inspection;

*“Section 5.1 — Inspections: including subsections 5.1.1, 5.1.2, and the first sentence in 5.1.3, will be implemented as set forth in Section 17.2.10 of the Operational QA Program. The inspection program will incorporate, as determined by station management, those items listed in these subsections.”*

A change is being made to the statement “as determined by station management” to more accurately reflect where the responsibility lies in that the determination is to be made by a qualified engineer or a Discipline Level III inspector. A similar clarification statement is being added to the remaining inspection related Regulatory Guides and Standards listed above.

5. Remove from the Topical Report the requirements for performing inspections consistent with original inspection requirements.

Dominion is committed to Regulatory Guide 1.33, “Quality Assurance Requirements (Operational)(Rev.2, 2/78)”, which endorses ANSI N18.7-1976. Section 5.2.7 of ANSI N18.7- 1976, titled Maintenance and Modification states (in part) in the first sentence in the first paragraph that “maintenance and modifications which may affect functioning of safety-related structures systems and components shall be performed in a manner to ensure quality at least equivalent to that specified in original...inspection requirements”. In addition, N18.7 section 5.2.17, third paragraph, references this section and states that “for modifications and non-routine maintenance, inspections shall be conducted in a manner similar (frequency, type, and personnel performing such inspections) to that associated with construction phase activities.” A clarification is being made to state that maintenance and modification activities will be conducted in accordance with the current Operational Quality Assurance Program and reference to construction phase activities and original requirements is being deleted.

6. Deleted from the Topical Report the requirement for random inspections and initiating a surveillance program.

A review of the Topical Report commitment documents has determined no specific requirement to perform inspections on a random basis or to have a surveillance program for maintenance or modification inspections. In addition, these types of activities are now performed when deemed appropriate by the Organizational Effectiveness group, utilizing self-assessment or other corrective action techniques. Original construction specifications contained requirements for random inspections, but for the above reasons we believe this is no longer required. Therefore this specific requirement is being deleted from the Topical Report.

7. Reworded Topical Report to address the issue of SNSOC approval of procedures for rework or repair of safety-related equipment.

Topical Report Section 17.2.16 Corrective Action currently states that procedures are reviewed by SNSOC. A clarification is needed to state "new" procedures are reviewed by SNSOC to be consistent with responsibilities of SNSOC for procedure reviews contained in Topical Report Appendix C, Section B.6 for North Anna and Technical Specification 6.1.C.1 for Surry. A clarification is also being added to state that procedure revisions containing intent changes to Hold Points must be made in accordance with inspection program requirements. Hold points required to be performed by the inspection program may only be removed with approval of a Discipline Level III or a qualified engineer.

8. Clarification in the Topical Report how procedural guidance will be provided for implementation of the inspection program and for hold point inspections.

Dominion is committed to Regulatory Guide 1.33, "Quality Assurance Requirements (Operational)(Rev.2, 2/78)", which endorses ANSI N18.7-1976. ANSI N18.7 requires that a program for inspection of activities affecting safety be established. The implementation of the Quality Inspection program, the requirements for hold point inspections, and the qualification of inspection personnel are outlined in VPAP-1001 "Inspection Program" and VPAP-1002 "Inspector Certification Program of Maintenance and Modification Personnel." These procedures use as a basis, the requirements of standards and regulatory guidelines committed to in this report. Additionally, requirements for the control of inspections, examinations, measurements, tests of material, products and activities, and special processes are contained in other administrative procedures. These procedures are approved by SNSOC, and audited by Nuclear Oversight, on a periodic basis, to verify compliance with commitments and regulations.

9. Clarification that the ANSI N18.7 requirement to have approved procedures may be implemented per approved Maintenance procedures in lieu of inspection procedures.

Dominion is committed to Regulatory Guide 1.33, "Quality Assurance Requirements (Operational)(Rev.2, 2/78)", which endorses ANSI N18.7-1976. Section 5.2.17 Inspections, of ANSI N18.7 fourth paragraph states; *"Inspections of safety-related activities shall be performed in accordance with approved written procedures, which set forth the requirements and acceptance limits and specify the inspection responsibilities."* The current Topical Report contains a clarification to this section. A clarification to this wording is being made as follows to clarify that specific inspection procedures are not required and that the requirements may be contained in the work or administrative procedures;

*"With regard to Section 5. 2.17 of ANSI N18.7- 1976, titled Inspections: Not all inspections will require generation of a separate inspection report. Inspection requirements **and guidance** may be integrated into appropriate **work** procedures or other documents with the procedure or document serving as the record. However, records of inspections will be identifiable and retrievable".*

10. Clarification that it is the worker who has the responsibility to ensure they have the correct revision of the procedure.

A clarification is being made to the Topical Report that the worker has the responsibility to ensure they have the latest revision of the document they are using. Maintenance and modification inspectors may verify the worker has checked his document revision during their inspection but this is not a documented inspection activity.

11. Clarification of which personnel have the authority to stop work.

Topical Report Section 17.2.16.1 Authority to Stop Work and 17.2.16.2 Imposition of "Stop Work" list the Quality Inspection Coordinator (QIC) as having the authority to stop work. A clarification is being made to replace the QIC with Quality Inspection personnel to more accurately reflect that any quality inspection personnel have the authority to stop work.

12. Clarification as to the commitment to Regulatory Guide 1.54 and ANSI N101.4 as referenced in ANSI N18.7.

Dominion is committed to Regulatory Guide 1.33, "Quality Assurance Requirements (Operational)(Rev.2, 2/78)", which endorses ANSI N18.7-1976. Paragraph C.2 of Regulatory Guide 1.33 discusses referenced standards and

applicable Regulatory Guides as being included in the requirements of the Standard. ANSI N18.7 Section 5.2.7 lists standards which it says contain useful guidance concerning design and construction related activities associated with modifications that shall be applied to those activities occurring during the operational phase that are comparable in nature and extent to related activities occurring during initial plant design and construction. Standard ANSI N101.4-1972 *Quality Assurance for Protective Coating Applied to Nuclear Facilities* (Regulatory Guide 1.54) is among the list provided. This standard has not been specifically listed by Dominion in the Topical Report as a commitment standard. Because it is incorporated by reference in the Regulatory Guide, Dominion is including it in the clarifications to Regulatory Guide 1.33 with the following clarification: "Applicability and implementation of this guide, including quality inspection requirements, for modifications will be determined, as needed, by a qualified engineer."

#### **4.0 References**

- 4.1 UFSAR Chapter 17 Section 17.2.
- 4.2 10 CFR 50 Appendix B
- 4.3 Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS) FSAR Section 1.8, "Conformance to NRC Regulatory Guides"
- 4.4 Palisades Nuclear Plant, "Quality Program Description for Nuclear Plants (Part 2) – Palisades Nuclear Power Plant (CPC-2A)"
- 4.5 Regulatory Guide 1.33, "Quality Assurance Requirements (Operation)", (Rev. 2, 2/ 78), endorses ANSI N18.7 - 1976.
- 4.6 Standard ANSI N18.7- 1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants".
- 4.7 Regulatory Guide 1.58, "Qualification of Nuclear Power Plant Inspection and Testing Personnel" (Rev. 1, 9/80), endorses ANSI N45.2.6 -1978.
- 4.8 Standard ANSI N101.4-1972, "Quality Assurance for Protective Coating Applied to Nuclear Facilities" (Regulatory Guide 1.54)
- 4.9 Regulatory Guide 1.30, "Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment" (8/ 72), endorses ANSI N45.2.4 - 1972.

- 4.10 Regulatory Guide 1.94, "Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants" - (Rev. 1, 4/ 76), endorses ANSI N45.2.5 - 1974.
- 4.11 Regulatory Guide 1.116, "Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems" - (Rev. 0-R, 6/ 76), endorses ANSI N45.2.8 - 1975.
- 4.12 Letter from Indiana & Michigan Electric Company to the U.S.N.R.C dated July 20, 1984 transmitting July 1984 updated version of the D. C. Cook Nuclear Plant FSAR.
- 4.13 Letter from the U.S.N.R.C. to American Electric Power Service Corporation, Indiana and Michigan Electric Company dated January 9, 1985 documenting the completed review of the July 1984 revision to D. C. Cook Nuclear Plant FSAR.

**Attachment 2**

**Mark-up of Topical Report**

**Dominion  
Surry and North Anna Power Stations  
Units 1 and 2**



~~Revision 38 09/03/02~~  
~~Revision 34 09/03/02~~

NAPS UFSAR  
SPS UFSAR

-17.2-2  
move to front  
of Table 17.2-0  
as indicated on  
page 17.2-45

Table 17.2.0

CONFORMANCE OF THE COMPANY'S OPERATIONAL QUALITY ASSURANCE PROGRAM TO NRC REGULATORY GUIDES AND ANSI STANDARDS

The ANSI standards, and other documents (i.e., other standards, codes, regulations, or appendices) that are required to be included as a part of this quality assurance program are either identified in Table 17.2.0 or they are described herein. Although this table includes references to ANSI Standards and Regulatory Guides that are required to be a part of this quality assurance program, the table is not intended to be a complete list of all NRC Regulatory Guides (etc.) to which the Company is committed. The specific applicability or acceptability of these listed standards, codes, regulations, or appendices is either covered in this program or such documents are not considered as quality assurance program requirements; although they may be used as guidance. When sections of ANSI Standards and other documents are referenced within this program, it is understood that the Company will comply with the referenced sections as clarified in Table 17.2.0.

GENERIC STATEMENTS WITH REGARDS TO TABLE 17.2.0 AND THE OPERATIONAL QUALITY ASSURANCE PROGRAM

For operations phase maintenance and modification activities which are comparable in nature and extent to similar activities conducted during the construction phase, the Company shall control these activities under this Operational Quality Assurance Program. Designated modifications may be controlled under a contractor's Quality Assurance Program which has been approved by the Company's Quality Assurance Program. When this Operational Quality Assurance Program or an approved contractor's Quality Assurance Program is used, the Company shall comply with the *Regulatory Position* established in the guides listed herein in that quality assurance programmatic/administrative requirements included therein (subject to the clarification in this table) shall apply to these maintenance and modification activities even though such requirements may not have been in effect originally. Maintenance or modifications which may affect the function of safety related structures, systems, or components shall be performed in a manner at least equivalent to that specified in original design bases and requirements, <sup>and</sup> materials specifications, <sup>set forth in section 17.2.10.</sup> and inspection requirements. A suitable level of confidence in structures, systems, or components on which maintenance or modifications have been performed shall be attained by appropriate inspection and performance testing.

Maintenance and modification inspections shall be performed in accordance with

*Definitions* in the referenced standards in this table which are not included in ANSIN45.2.10 will be used as clarified in the Company's commitment to Regulatory Guide 1.74.

(5)



Revision 38—09/03/02  
Revision 34—09/03/02

NAPS UFSAR  
SPS UFSAR

17.2-17

facilities. At least five years of overall experience shall have been in a supervisory capacity, two years of which should have involved quality assurance related matters.

The Manager Nuclear Oversight shall have a four-year accredited engineering or science degree or equivalent with a minimum of eight years experience related to electric power generation facilities, two years of which involve experience in nuclear power stations. At least four years of overall experience shall have been in a supervisory capacity, two years of which should have involved quality assurance related matters.

The Supervisor Nuclear Quality (Vendor Programs) shall have a four-year accredited engineering or science degree, or equivalent with a minimum of two years overall experience or equivalent training in power plant operations is a prerequisite with at least one year of this experience involved in nuclear power station quality assurance program implementation.

The Nuclear Specialist (Audit Coordinator) shall have a four-year accredited engineering or science degree, or equivalent with a minimum of two years overall experience or equivalent training in power plant operations is a prerequisite with at least one year of this experience involved in nuclear power station quality assurance program implementation.

Personnel in the key positions listed will meet or exceed the above requirements or, as an alternative, the applicable requirements of paragraph 4.4.5 of ANSI/ANS 3.1 (Draft 12/79) as clarified in Table 17.2.0.

**17.2.2.6 Qualification of Other Support Personnel**

~~The Quality Inspection Coordinator responsible for certifying maintenance and modification inspection personnel shall have a four-year accredited engineering or science degree, or equivalent with a minimum of two years overall experience or equivalent training in power plant operations. At least one year of this experience shall be involved in nuclear power station quality assurance program implementation.~~

} Insert 1 (i)

The Manager Vendor Quality shall have a four-year accredited engineering or science degree, or equivalent with a minimum of two years overall experience or equivalent training in power plant operations. At least one year of this experience shall be involved in nuclear power station quality assurance program implementation.

Replacement personnel in the key positions listed will meet or exceed the applicable requirements of ANSI/ANS 3.1 (Draft 12/79) as clarified in Table 17.2.0.

**17.2.2.7 Certification of Nuclear Oversight Personnel**

The certification of Nuclear Oversight personnel is accomplished in accordance with the Quality Assurance Certification Program. This program provides for the certification and recertification of auditors and lead auditors.

Insert 1

The Quality Inspection Coordinator (QIC) responsible for certifying maintenance and modification inspection personnel, and the Supervisor Material Verification responsible for certifying material verification and vendor surveillance personnel shall have the following education and experience and be certified as an Administrative Level III.

1. Six years of satisfactory performance as a Level II in any inspection, examination or test category or class, or
2. High school graduation plus ten years of related experience in inspection, examination, or testing activities associated with nuclear facilities; or high school graduation plus eight years of related experience in inspection, examination, or testing activities associated with nuclear facilities, with at least two years as a Level II, or
3. Four-year college graduation plus five years of related experience in inspection, examination, or testing activities associated with nuclear facilities.

(1)

The following are examples of related experience in inspection, examination, or testing activities associated with nuclear facilities: VT 1, 2 or 3, ASME Section XI Inspections, IST (Pumps and Valves), Non-destructive Examination, etc.

The Administrative Level III may be certified by either a discipline Level III or the cognizant management in accordance with Table 17.2-0 clarification of Regulatory Guide 1.58 requirements. Re-evaluation of the Administrative Level III will be consistent with the requirements in ANSI N45.2.6, in that the Administrative Level III will be re-evaluated on a three-year frequency. The re-evaluation will be based on satisfactory performance of duties required for maintaining the inspection program under his supervision.

Where the term "qualified engineer" is used in reference to inspection program activities, the engineer shall meet the requirements of Engineer in Charge per Regulatory Guide 1.8 (ANSI 3.1 Draft 12/79) as clarified in Table 17.2-0: 1) Bachelor's Degree in Engineering or related sciences, 2) Six years of professional level experience in nuclear services, nuclear plant operation, or nuclear engineering, and the necessary overall nuclear background to determine when to call consultants and contractors for dealing with complex problems beyond the scope of the owner-organization expertise, and 3) Training as required by ANSI 3.1 Section 5.3.1.



Revision 38—09/03/02  
Revision 34—09/03/02

NAPS UFSAR  
SPS UFSAR

17.2-18

The program outlines the qualification and certification requirements for personnel and requires the individual to be certified prior to performing specified audit functions. Nuclear Oversight management has the responsibility to certify audit personnel.

**17.2.2.8 Certification of Other Support Personnel**

The certification of maintenance and modification inspection personnel [i.e., Quality Maintenance Team (QMT) and station Quality Control inspectors)], Material Verification personnel, Vendor Surveillance personnel, Fuel Accountability and Inspection personnel, and Inservice Testing [Visual Test (VT)] personnel is accomplished in accordance with the approved certification programs.

These programs outline the qualification and certification requirements of personnel and require the individual to be certified prior to performing specified functions. ~~Nuclear Training has the responsibility to train maintenance and modification inspection personnel. The Quality Inspection Coordinator has the responsibility to qualify and certify maintenance and modification inspection personnel.~~

} Insert 2 | ①

**17.2.3 Design Control**

Nuclear Standards describe the design control program. Measures are established to assure that applicable regulatory requirements and the nuclear power station design bases are correctly translated into the Company specifications, drawings, procedures, and instructions applicable to design changes and/or modifications for the operating nuclear power station.

All design changes and/or modifications to safety-related structures, equipment, systems and components described in the UFSAR are reviewed, approved, and acted upon by the Station Nuclear Safety and Operating Committee in accordance with their responsibilities and functions as referenced in the Technical Specifications for Surry Power Station and Appendix C of this topical report for North Anna Power Station. The responsibility for the development, identification of requirements, monitoring, and implementation of an effective design control program is delegated to the Vice President Nuclear Engineering with input as appropriate from the Site Vice President and operations personnel.

The Nuclear Design Control Program (NDCP), delineates procedures that assure design changes, including field changes, are subject to design control measures commensurate with those applied to the original design and the applicable specified design requirements. These procedures assure that design basis, regulatory requirements, codes and standards are correctly translated into specifications, drawings, procedures, or instructions for those structures, systems and components classified as safety-related in the UFSAR and Q-List. The NDCP provides for verifying or checking the adequacy of design, 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. When a testing program is solely used to test the adequacy of a design, the test will be conducted under adverse design conditions. The provisions of this section assure that the verifying or

Insert 2

Nuclear Training has the responsibility to train maintenance and modification inspection personnel using lesson plans approved by an ANSI N45.2.6 Discipline Level III inspector or qualified engineer. The Supervisor Material Verification will train material verification and vendor surveillance personnel using lesson plans approved by a Discipline Level III inspector or qualified engineer. The Administrative Level III (Quality Inspection Coordinator (QIC) for maintenance and modification inspection personnel, and the Supervisor Material Verification for material verification and vendor surveillance personnel) has the responsibility to administer the program to qualify and certify inspection personnel. This includes the Administrative Level III's selection of an appropriate Level II inspector (with a minimum of 2 years inspection experience) or qualified engineer to review Job Performance Measures (JPM). Evaluation of the adequacy of specific programs used to train and test inspection personnel and approval of technical changes to the approved Quality Inspection Program shall be performed by a Discipline Level III inspector or a qualified engineer.

(1)



Revision 38 — 09/03/02—  
Revision 34 — 09/03/02

NAPS UFSAR  
SPS UFSAR

17.2-22

the same organizations that performed the original review and approval; however, this responsibility may be delegated to other qualified responsible organizations. Approved changes are incorporated into procedures and drawings and other appropriate documents associated with the change. Procedures and drawings and changes thereto are processed, distributed and controlled. The station maintains a record of all holders of procedures and drawings and an index of all procedures and drawings, listing the current revision date. Instructions require that a copy of the appropriate procedure be available at the activity location prior to the commencement of that activity. These measures are addressed in the Technical Specifications for Surry Power Station and Appendix C of this topical report for North Anna Power Station as well as in Administrative Procedures for each station.

Administrative procedures list certain documents that require strict administrative control for distribution, revision, and routing. These documents are categorized as “Controlled Documents.” Examples of controlled documents are: Station Procedures, Station Drawings, and the Precautions, Limitations, and Setpoint Document. Also set forth are the distribution and controlling procedures for design and procurement documents. ~~Maintenance and modification inspection activities ensure that current procedures are used to accomplish work.~~ } Insert 3 | (10)

**17.2.7 Control of Purchased Material, Equipment, and Services**

An evaluation of suppliers is performed prior to contract award, except in emergency situations where an item or service is needed to preclude development or deterioration of an unsafe condition at the plant, by one or more of the following: (1) A review of the supplier’s capability to comply with the elements of 10 CFR 50, Appendix B that are applicable to the type of material, equipment, or service being procured, (2) A review of previous records and performances of suppliers who have provided similar articles of the type being procured, (3) A survey of the supplier’s facilities and quality assurance program to determine his capability to supply a product or service which meets the design, manufacturing, and quality requirements, or (4) A review of qualification information supplied by another utility or outside organization. Surveillance of suppliers during fabrication, inspection, testing, and shipment of materials, equipment, and components is planned and performed in accordance with written procedures to assure conformance to the purchase order requirements as applicable. These procedures provide for:

- a. Instructions that specify the characteristics or processes to be witnessed, inspected or verified, and accepted; the method of surveillance and the extent of documentation required; and those responsible for implementing these instructions. Surveillance shall be performed on those items where verification of procurement requirements cannot be determined on receipt.
- b. Audits and/or inspections which assure that the supplier complies with all quality requirements.

Insert 3

Maintenance and modification inspection activities may ensure that the worker has verified that the current procedures are being used to accomplish work. The workers themselves, however, have the ultimate responsibility to ensure they have the latest revision of the document they are using.

(10)



Revision 38—09/03/02  
Revision 34—09/03/02

NAPS UFSAR  
SPS UFSAR

17.2-24

correct identification of safety-related materials, parts, and components is required and documented prior to the release for fabrication, assembling, shipping, or installation.

Maintenance and modification inspection activities <sup>may be used to provide additional assurance</sup> ~~ensure, on a random basis,~~ that materials, parts, and components utilized at the nuclear station are appropriately identified and controlled. (6)

### 17.2.9 Control of Special Processes

The control of special processes is maintained and implemented through the use of procedures, technique sheets, travelers and inspection verification reports, and personnel qualified in accordance with the applicable codes, specifications, and standards for the specific work. In instances where the Company assigns such work to contractors, the contractor must submit their procedures and personnel qualifications to the Company for approval prior to the start of work.

Special processes include, for example, those involving welding, heat treating, non-destructive testing, cadwelding, removal of undesirable substances during shop and site cleaning, degreasing and flushing, and verification of wall thickness of valves and other cast components important to nuclear safety.

~~The Company conducts inspections of work involving special processes to assure that procedures and personnel are properly qualified and their workmanship is in compliance with applicable specifications, codes, and standards.~~ Insert 4 (8)

Records of procedures, equipment, and personnel qualification are maintained and kept current in accordance with the provisions of Section 17.2.17 herein.

### 17.2.10 Inspection

~~Inspection procedures for those activities affecting quality have been established. These procedures govern the inspection and documentation of activities relating to repairs, modifications, and changes made to safety-related systems, structures, and components. Written maintenance procedures are provided which include inspection hold points.~~ Insert 5 (8)

Examinations, measurements, or tests of materials or components associated with safety-related equipment and systems are performed for each work operation, where necessary, to assure quality. If inspection is impossible or inappropriate, indirect control by monitoring methods, equipment, and personnel is provided. Both methods are provided when control is inadequate without both.

~~The station maintenance procedures are reviewed under the cognizance of the Director Nuclear Station S&L or designee to determine the need for an independent inspection and the degree and method if such an inspection is required. Modification procedures are reviewed by the design authority to determine the need for an independent inspection consistent with administrative procedures and engineering specification requirements. Examinations,~~ Insert 6 (3)

Insert 4

Procedures and personnel are qualified in accordance with applicable specifications, codes, and standards. The Company conducts inspections of work involving special processes to assure that workmanship is in compliance with applicable specifications, codes, and standards.

(8)

Insert 5

Procedures for those activities affecting quality have been established. These procedures include the inspection and documentation of activities relating to repairs, modifications, and changes made to safety-related systems, structures, and components. These written maintenance and modification procedures include inspection hold points where necessary. When hold points are required, the procedures will either contain or reference the information required to perform the inspection. This information will include, as applicable, objectives, acceptance criteria, prerequisites, special or limiting conditions, additional procedures required, special equipment or calibrations. Inspections, measurements, or tests that require witnessing are identified as "inspection hold" points in procedures. The inspection performed at a hold point is specific in nature; quality characteristics and acceptance/rejection criteria are included or qualitative criteria such as operability checks, compliance with procedural steps, or cleanliness instructions are specified. Signature or initials on the written procedure form document the inspection.

(8)

## Insert 6

The station maintenance procedures are reviewed by the Quality Inspection Coordinator to determine the need for independent inspection and the degree and method if such an inspection is required. Modification and special procedures are reviewed by the design authority and the Quality Inspection Coordinator to determine the need for an independent inspection. For non-routine maintenance/modification work activities on safety-related components the following Regulatory Guides and ANSI standards will be utilized for determining inspection hold points as determined by a Discipline Level III or qualified engineer, with clarifications as noted in Table 17.2-0: Reg. Guide 1.30 (N45.2.4-1972), Reg. Guide 1.94 (N45-2.5-1974), Reg. Guide 1.116 (N45.2.8-1975) and Reg. Guide 1.54 (N101.4-1972). Non-routine maintenance is defined as maintenance which is both infrequently performed (once in the life of the plant) and requires special procedures. The QIC will determine if a maintenance procedure, for infrequently performed maintenance, is to be considered non-routine for establishing hold points.

Inspection hold points for routine maintenance will be placed in technical procedures where necessary to assure quality. Routine maintenance is defined as maintenance activities required to preserve or restore plant systems, structures, and components to their approved design configuration. For safety related welding and civil activities (concrete, grout, soils, coatings and structural steel) inspections will be conducted as required by the applicable codes and standards. Inspections for routine maintenance may be conducted by peer inspections using independent or simultaneous verification, or by qualified inspection personnel. The determination of these inspection hold points and the type of inspection to be performed will be based on Engineering Specifications or other Engineering documents (Installation Specifications, Corporate Weld Manual, Engineering Transmittal etc.) The Quality Inspection Coordinator, Engineering, or Management may request additional hold points.

(3)



Revision 38 — 09/03/02  
Revision 34 — 09/03/02

NAPS UFSAR  
SPS UFSAR

17.2-25

~~measurements, or tests that require witnessing are identified as “inspection hold” points in procedures. The inspection performed at a hold point is specific in nature, quality characteristics and acceptance/rejection criteria are included or qualitative criteria such as operability checks, compliance with procedural steps, or cleanliness instructions are specified. The inspection is documented by signature or initials on the written procedure form.~~

(8)

~~Maintenance and modification inspection personnel perform physical inspections at random intervals to ensure quality requirements are met. These checks are performed as the conditions of the maintenance warrant. These personnel and other inspectors are qualified in accordance with codes and standards as applicable to the function they are performing.~~

} Insert 7

(6)

The inspection program requires that inspectors be assigned as appropriate for the activity being inspected. An inspector may be a member of the organization performing the activity. However, they must be qualified and shall not be the person performing the activity or the supervisor directly responsible for the activity. Maintenance and modification inspection personnel are under the administrative direction of the Quality Inspection Coordinator when performing Quality Control inspections. Personnel so assigned shall become familiar with the procedure being used and other pertinent documents such as technical manuals and drawings prior to performing the inspection.

Personnel responsible solely for the conduct of non-destructive examination are qualified to SNT-TC-1A as referenced by Table IWA-1600-1 of the applicable Code. In addition, personnel who conduct inservice or preservice examinations meet the additional and/or alternative qualification requirements specified by IWA-2300 for the applicable examination method and qualification level. Maintenance and modification inspection personnel, Material Verification personnel, Fuel Accountability and Inspection personnel, and Vendor Surveillance personnel meet the qualification requirements of ANSI N45.2.6-1978, as clarified in Table 17.2.0 under NRC Regulatory Guide 1.58. The inspectors' qualifications are periodically reviewed for recertification.

Generally, all physical inspections are under the control of the on-site organization. However, the Site Vice President is authorized to request assistance as required from Corporate support organizations.

The inspection of nuclear fuel and related items is controlled in accordance with procedures that have been developed by Nuclear Analysis and Fuel to address the requisite quality attributes of this function.

Additionally, inspection activities pertaining to Design Control (Section 17.2.3); Procurement Document Control (Section 17.2.4); Test Control (Section 17.2.11); Nonconforming Materials, Parts, or Components (Section 17.2.15); and Corrective Action (Section 17.2.16) shall be controlled in accordance with provisions established for this function in the referenced sections contained herein.

Insert 7

Maintenance and modification inspection personnel perform physical inspections as indicated by the controlling procedure to ensure quality requirements are met. Random inspections of maintenance, modification and testing activities may be performed as determined by a qualified engineer or the QIC.

(6)



~~Revision 38 09/03/02~~  
~~Revision 34 09/03/02~~

NAPS UFSAR  
SPS UFSAR

17.2-30

been developed by Nuclear Analysis and Fuel to address the requisite quality attributes of this function.

### 17.2.16 Corrective Action

Corrective action measures are established as an integral part of the processing and resolving of non-conformances and failures in service. Through these measures, assurance is confirmed that significant adverse quality conditions are identified, documented, their cause determined, and the corrective actions have been taken that preclude repetition of the adverse quality conditions. Verification of the proper implementation of corrective action measures and close-out of corrective action documentation is assured through the monitoring effort of the station staff and the audits conducted by Nuclear Oversight. Adverse conditions significant to quality, the cause of the conditions, and the initiation of corrective action are reported to appropriate levels of both offsite and onsite management by use of Deviation Reports and audit findings. If further corrective action is required the appropriate management program for performing, tracking and closing the issue will be used.

Nuclear Engineering maintains a program to evaluate complex design concerns that may lead to adverse quality conditions at the nuclear stations. The Potential Problem Reporting (PPR) system allows for detailed, multidiscipline reviews of complex design concerns that may yield station deviation reports. Many design concerns cannot be determined to be adverse to quality until a detailed design review is performed. The PPR process controls this activity as part of the Nuclear Design Control Program.

The procedures for processing a Deviation Report require that each adverse condition significant to quality be categorized as either requiring a Licensee Event Report, Special Report or NRC Notification or as a non-reportable deviation. Non-reportable deviation refers to deviations not reportable to the Nuclear Regulatory Commission. The reporting requirements differ for each of the categories of deviation but require the appropriate levels of management be notified in each case.

Procedures require that corrective maintenance of nuclear safety-related material, parts, or components be documented on a Work Order. ~~Maintenance and modification inspection personnel are notified prior to the commencement of safety-related maintenance. Maintenance and modification inspection personnel may then initiate a surveillance program as necessary. Examples of areas subject to surveillance are (1) the use of approved maintenance procedures, (2) the existence of Radiation Work Permits and proper tagout, if applicable, (3) the existence of required plant conditions, and (4) documentation of Technical Specification requirements. If the maintenance and modification inspection personnel elect to inspect the work, the surveillance does not have to be performed prior to commencement of work.~~ Also, Nuclear Oversight audits completed Work Orders to assure maintenance performed was properly documented, maintenance procedures were properly signed off and check lists were completed if applicable, Technical

Insert B (6)

Insert 8

Maintenance and modification inspection personnel are contacted prior to the commencement of maintenance activities which require them to perform an inspection in order to allow for adequate preparation.

(6)



Revision 38—09/03/02  
Revision 34—09/03/02

NAPS UFSAR  
SPS UFSAR

17.2-31

Specification limits were met if applicable, materials used were documented, and Work Orders were being adequately reviewed by appropriate supervisory personnel.

Rework or repair of nuclear safety-related materials, parts, components, systems, and structures shall be accomplished in accordance with approved written procedures. <sup>New</sup> The procedures for rework or repair of safety-related equipment are approved by the Station Nuclear Safety and Operating Committee to ensure provisions for an adequate inspection of the completed rework or repair. The cognizant supervisor reviews the completed procedures to insure the acceptance criteria have been satisfied and for the completeness of the post-maintenance check-out.

{ (7)  
| (7)

Insert 9

~~The Quality Inspection Coordinator determines the scope of the required inspection effort on the basis of the extent of modifications or repair to safety-related equipment, systems, or components.~~ For some repairs and modification activities, pre-job briefings held by station personnel in accordance with applicable administrative procedures may be attended by maintenance and modification inspection personnel at the discretion of the Quality Inspection Coordinator. For *major evolutions*, such as refueling, steam generator modifications, etc., inspection activities will be planned and coordinated as directed by <sup>a</sup> the Quality Inspection Coordinator.

} Insert 10 (8)

<sup>a</sup> qualified engineer or

| (1)

#### 17.2.16.1 Authority to Stop Work

Nuclear Oversight and <sup>Personnel</sup> the Quality Inspection ~~Coordinator~~ have the authority, and the responsibility, to stop work in progress which is not being done in accordance with approved procedures or where safety or equipment integrity may be jeopardized. This extends to off-site work performed by vendors furnishing safety-related materials and services to the Company.

| (11)

#### 17.2.16.2 Imposition of "Stop Work"

- A. Nuclear Oversight and <sup>Personnel</sup> the Quality Inspection ~~Coordinator~~ - The Nuclear Oversight representative or maintenance or modification inspector advises the cognizant supervisor or supervisory personnel to stop work in progress whenever he determines that it is not being conducted in accordance with applicable procedures, instructions, guides, or standards or may jeopardize the safe operation of the station. Nuclear Oversight representatives inform the Manager Nuclear Oversight of the stop work order. The maintenance or modification inspector informs the Quality Inspection Coordinator and the Manager Nuclear Oversight of the decision to stop work. The Manager Nuclear Oversight or the Quality Inspection Coordinator then notifies the Site Vice President of the decision to stop work because of adverse quality conditions. He shall also notify the Director Nuclear Oversight.

| (11)

Insert 9

Procedure revisions containing intent changes to Hold Points must be made in accordance with inspection program requirements. Hold points required to be performed by the inspection program may only be removed with approval of a Discipline Level III inspector or a qualified engineer.

(7)

Insert 10

The Quality Inspection Coordinator (QIC) or qualified engineer determines the scope of the required inspection effort on the basis of the extent of modifications or repair to safety-related equipment, systems, or components and verifies the work procedures contain the proper inspection hold points as required by the inspection program.

(8)

Insert contents of page 17.2-2

Table 17.2-0  
STANDARD, REQUIREMENT OR GUIDE

**Regulatory Guide 1.8 — Personnel Qualification and Training** (Second Proposed Revision 2, 9/80) Endorses  
ANSI/ANS 3.1 (Draft 12/79)

The applicability of this guide/standard to other personnel in the Company organization is addressed in other sections of the UFSAR and the Technical Specifications of the individual nuclear facility.

The Company's Position	Conformance Status	Justification
<p>The Operational Quality Assurance Program complies with this guide and standard, with one (1) exception, one (1) clarification and four (4) alternatives. They are:</p> <p>(1) <b>Exception:</b> With regard to Section 4.2.2 of ANS 3.1 (Draft 12/79), titled <i>Operations Manager, Paragraph C, Training</i>: The Operations Manager will have or have held a senior operator license.</p>	<p>Clarification and Alternative meet or exceed applicable guides and standards.</p>	<p>(1) For Exception: NRC License Amendment Nos. 142 and 125 dated December 4, 1990 for North Anna and NRC License Amendment Nos. 151 and 148 dated December 31, 1990 for Surry approved revisions to the Technical Specifications granting relief from Section 4.2.2 of ANS 3.1 (Draft 12/79). The exception allows the Manager Nuclear Operations to hold or have previously held a Senior Reactor Operator License for the facility or a similar designed Pressurized Water Reactor plant. The Supervisor Nuclear Shift Operations will fulfill the Operations Manager requirements of ANS 3.1 (Draft 12/79). This change allows the Manager Nuclear Operations to perform management functions and examine training programs.</p>

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Table 17.2-0 (continued)  
STANDARD, REQUIREMENT OR GUIDE

Revision 38 09/03/02  
Revision 34 09/03/02

NAPS UFSAR  
SPS UFSAR

17.2-52

**Regulatory Guide 1.30** (continued) — *Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment (8/72)*. Endorses ANSI N45.2.4-1972

The Company's Position	Conformance Status	Justification
<p>Section 5.1 — <b>Inspections:</b> including subsections 5.1.1, 5.1.2, and the first sentence in 5.1.3, will be implemented as set forth in Section 17.2.10 of the Operational QA Program. The inspection program will incorporate, as determined by station management, those items listed in these subsections. The remaining sentence in 5.1.3 is covered in equivalent detail in the Company's commitment to ANSI N18.7, section 5.2.6; the requirements as set forth in that commitment will be implemented in addition to the requirements stated here.</p>		<p>(4)</p>
<p>Section 5.2 — <b>Tests:</b> including subsections 5.2.1 through 5.2.3, will be implemented as set forth in Sections 17.2.3 and .11 of the Operational QA Program. The test program will consider the elements outlined in this Section, as determined by station management, when developing test requirements for inclusion in maintenance and modification procedures. In some cases, testing requirements may be met by post-installation surveillance testing in lieu of a special post-installation test. Where elements of Section 5.2 are not being met they shall be documented and justified.</p>		
<p>(4) Section 6 — <b>Post Construction Verification:</b> is not generally considered applicable at operating facilities because of the scope of work and the relatively short interval between installation and operation. Where considered necessary by station management, the elements described in this section will be used in the development and implementation of inspection and testing programs as described in Sections 17.2.3, .10, and .11 of the Operational QA Program.</p>		

*a qualified engineer or a Discipline Level III inspector*



Table 17.2-0 (continued)  
STANDARD, REQUIREMENT OR GUIDE

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

The Company's Position	Conformance Status	Justification
<p>The Operational Quality Assurance Program complies with this guide with the following clarifications and alternatives:</p> <p>(1) Paragraph C.3 (<i>Subjects Requiring Independent Review</i>) of Regulatory Guide 1.33 (and Section 4.3.4 of ANSI N18.7-1976 which it references) will be implemented as required by the applicable nuclear facility Technical Specifications, Emergency Plan, Security Plan, and Fitness for Duty Program which designate the areas subject to independent reviews.</p> <p>(2) Paragraph C.4 (<i>Audit Program</i>) of Regulatory Guide 1.33 (and Section 4.5 of ANSI N18.7-1976 which it references) will be implemented as required by the applicable nuclear facility Technical Specifications, Emergency Plan, Security Plan, Fitness for Duty Program, and administrative controls which designate the minimum areas to be audited. The audit program is further defined and will be implemented as required by the commitment to ANSI N45.2.12 as stated in Table 17.2.0 of the Operational Quality Assurance Program.</p> <p>Paragraph C.4.c of Regulatory Guide 1.33 (and ANSI N18.7 to which it references) will be implemented as clarified in Section 17.2.18 of the Operational Quality Assurance Program Topical Report. Specifically, the frequency for conducting audits of the performance, training, and qualifications of the facility staff may vary based on performance and the safety significance of the audited activity but will not be less frequent than biennial (2 years).</p>	<p>Clarifications and alternatives meet or exceed applicable guides and standards.</p>	<p>These clarifications are required to ensure that QA program continuity is maintained; i.e., that only one standard or guide is committed to for a particular topic.</p>

Insert 11

Revision 38 09/03/02  
Revision 34 09/03/02

(12)

NAPS UFSAR  
SPS UFSAR

17.2-54

Insert 11

- (1) Paragraph C.2 of Regulatory Guide 1.33 discusses referenced standards and applicable Regulatory Guides as being included in the requirements of ANSI N18.7-1976. Section 5.2.7 of ANSI N18.7 – 1976, Maintenance and Modifications, references ANSI N101.4-1972 *Quality Assurance for Protective Coating Applied to Nuclear Facilities* (Regulatory Guide 1.54 Rev. 0, 1973) as a standard to be used for modification activities similar in nature to related activities occurring during initial plant design and construction. Applicability and implementation of Regulatory Guide 1.54 Rev.0, including quality inspection requirements, for modifications will be determined, as needed, by a qualified engineer.

(12)



Table 17.2-0 (continued)  
STANDARD, REQUIREMENT OR GUIDE

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

The Company's Position	Conformance Status	Justification
<p>(10) With regard to Section 5.2.2 of ANSI 18.7-1976, titled <b>Procedure Adherence</b>: The third and fourth sentences of the first paragraph of the Section address approval requirements for temporary changes to procedures which do not change the intent of the approved procedure. Adequate reviews will be provided by two members of the plant supervisory staff knowledgeable in the areas affected, one of which will hold a senior reactor operator license on the unit affected. Adequate reviews will be performed in accordance with Section 17.2.5 above, the Technical Specifications for Surry Power Station and Appendix C of this topical report for North Anna Power Station.</p>		
<p>(11) With regard to Section 5.2.7 of ANSI N18.7-1976, titled <b>Maintenance and Modification</b>: Since some emergency situations could arise which might preclude preplanning of all activities, the Company will comply with an alternate to the first sentence in the second paragraph which reads: "Except in emergency or abnormal operating conditions where immediate actions are required to protect the health and safety of the public, to protect equipment or personnel or to prevent the deterioration of plant conditions to a possibly unsafe or unstable level, maintenance or modification of equipment shall be preplanned and performed in accordance with written procedures. Where written procedures would be required and are not used, the activities that were accomplished shall be documented after-the-fact and receive the same degree of review as if they had been preplanned."</p>	<p>Insert 12 as new paragraph</p>	

Revision 38 09/03/02  
 Revision 34 09/03/02



③

NAPS UFSAR  
 SPS UFSAR

17.2-57

Insert 12

The first sentence in the first paragraph states in part that “maintenance and modifications which may affect functioning of safety-related structures systems and components shall be performed in a manner to ensure quality at least equivalent to that specified in original...inspection requirements”. In addition, ANSI N18.7 section 5.2.17, third paragraph, references this section and states that “for modifications and non-routine maintenance, inspections shall be conducted in a manner similar (frequency, type, and personnel performing such inspections) to that associated with construction phase activities.” For non-routine maintenance and modification inspections, the Company will meet this requirement by performing inspections in accordance with the inspection requirements contained in the ANSI standards and Regulatory Guides (as clarified by Table 17.2-0) listed in the fourth paragraph of ANSI N18.7 section 5.2.7. For routine maintenance activities, the Company will meet this requirement through Engineering direction (Section 17.2.10).

(3)



Table 17.2-0 (continued)  
STANDARD, REQUIREMENT OR GUIDE

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

The Company's Position	Conformance Status	Justification
<p>(15) With regard to Section 5.2.15 of ANSI N18.7-1976, titled <b>Review, Approval and Control of Procedures</b>: The third sentence in paragraph three is interpreted to mean: Applicable procedures, as determined by Station Management, shall be reviewed following an accident, an unexpected transient, significant operator error or equipment malfunction.</p> <p>The first sentence of the fourth paragraph is considered to be met via procedure reviews as described by administrative procedures. Additional procedure review, approval, and control requirements/exceptions are discussed in Section 17.2.5. above.</p>		<p>The <b>biennial</b> review requirement is deleted. The procedures upgrade program provides a systematic and effective process for developing and revising procedures which encompasses the intent of the biennial review.</p>
<p>(16) With regard to Section 5.2.17 of ANSI N18.7-1976, titled <b>Inspections</b>: Not all inspections will require generation of a separate inspection report. Inspection requirements may be integrated into appropriate <sup>work</sup> procedures or other documents with the procedure or document serving as the record. However, records of inspections will be identifiable and retrievable.</p>		
<p>(17) With regard to Section 5.3.9 of ANSI N18.7-1976, titled <b>Emergency Procedure</b>: As directed by the NRC, the Company follows a format for emergency procedures which is "symptom" based as opposed to "event" based as stipulated in Section 5.3.9.1. Since the Company has these "symptom" based procedures; "event" based procedures are not normally provided.</p>		
<p>(18) With regard to Section 5.3.9.2 of ANSI N18.7-1976, titled <b>Events of Potential Emergency</b>: The Company will interpret item (11) to mean the natural occurrences which have been evaluated in the UFSAR for the individual nuclear facility.</p>		

Revision 38 09/03/02  
Revision 34 09/03/02

NAPS UFSAR  
SPS UFSAR

17.2-59



Table 17.2-0 (continued)  
STANDARD, REQUIREMENT OR GUIDE

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

Revision 38 — 09/03/02  
Revision 34 — 09/03/02

The Company's Position	Conformance Status	Justification
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(4) With regard to Section 3.1 of ANSI N45.2.6-1978, titled **General**:

Insert 13 { ~~The Company will implement the requirements of this Section with the stipulation that, Level III inspectors are not a specific requirement of the Company's inspection program.~~

(1) and (2)

NAPS UFSAR  
SPS UFSAR

17.2-76

Insert 13

The Company will implement the requirements of this Section with the addition of an Administrative Level III position and the use of qualified engineers.

(5) With regard to section 3.3 of ANSI N45.2.6 – 1978, titled “Level II Capabilities”: The paragraph states that a Level II qualified person shall have demonstrated experience in certifying lower level qualified persons. The Company does not use Level II qualified persons for certification of inspectors, and does not require Level II qualified persons to demonstrate this capability. However, the Company may use Level II personnel (with a minimum of two years experience in inspection) to support this process by assisting with the implementation of the training program including the administration of Job Performance Measures (JPM) for qualification of Level I, II and III inspectors.

(6) With regard to Section 3.4 of ANSI N45.2.6 – 1978, titled “Level III Personnel Capabilities”: The first sentence states that a Level III qualified person shall have all the capabilities of a Level II qualified person for the inspection, examination or test category or class in question. For maintenance and modification, material verification and vendor surveillance inspectors, the Company will qualify Level III persons without the actual hands on experience and capability to perform specific inspections, examinations or tests required of a Level I or II qualified person, and utilize these persons (Administrative Level III) for administrative and supervisory functions including certifying persons at the same or lower level.

The second sentence states in part that the Level III shall be capable of evaluating the adequacy of specific programs used to train and test inspection, examination, and test personnel whose qualifications are covered by this standard. For maintenance and modification, material verification and vendor surveillance inspectors, the Company will utilize a Discipline Level III or qualified engineer for evaluating the adequacy of specific programs used to train and test inspection, examination and testing personnel. The Administrative Level III will administer the approved program.

(7) With regard to Section 3.5.3 of ANSI N45.2.6 – 1978, titled “Education and Experience – Recommendations, Level III”: the Company will utilize the following requirements for Administrative Level III personnel.

- 1 Six years of satisfactory performance as a Level II in any inspection, examination or test category or class, or
- 2 High school graduation plus ten years of related experience in inspection, examination, or testing activities associated with nuclear facilities; or high school graduation plus eight years of related experience in inspection, examination, or testing activities associated with nuclear facilities, with at least two years as a Level II, or
- 3 Four-year college graduation plus five years of related experience in inspection, examination, or testing activities associated with nuclear facilities.

The following are examples of related experience in inspection, examination, or testing activities associated with nuclear facilities: VT 1, 2 or 3, ASME Section XI Inspections, IST (Pumps and Valves), Non-destructive Examination, etc.

(1)

Insert 13 (cont)

(8) With regard to Section 4 of ANSI N45.2.6 – 1978, titled “Performance” and associated Table 1, Minimum Levels of Capability for Project Functions; Paragraph 4 states that personnel who are assigned the responsibility and authority to perform functions covered by this Standard shall have, as a minimum, the level of capability shown in Table 1. The Administrative Level III will perform the last four Project Functions listed for the Level III (as clarified herein); Supervising equivalent or lower level personnel, evaluating the results of specific programs used to train and test inspection, examination and testing personnel and qualifying same or lower level personnel. A Discipline Level III or qualified engineer will evaluate the adequacy of the specific programs used to train and test the inspection, examination and testing personnel. A Level II (with a minimum of two years of inspection experience) or a qualified engineer will be used for administration of Job Performance Measures (JPM). The Administrative Level III may be certified by either a discipline Level III or the cognizant management in accordance with the requirements set forth in this document. Re-evaluation of the Administrative Level III will be consistent with the requirements in ANSI N45.2.6, in that the QIC will be re-evaluated on a three-year frequency. The re-evaluation will be based on satisfactory performance of duties required for maintaining the inspection program.

The third project function, planning inspections, may also be performed by the Administrative Level III. The Administrative Level III will plan inspections based on the approved Inspection Program which has been approved by Discipline Level III inspectors and qualified engineers.

The seventh project function, qualifying lower level personnel, will be modified by noting that the Company may use Level II personnel (with a minimum of two years experience in inspection) to administer Job Performance Measures (JPM) for qualification of Level I, II and III inspectors.

(9) With regard to Regulatory Guide 1.58, Position C.6 referencing ANSI N45.2.6 Section 3.5, “Education and Experience – Recommendations”: The Reg. Guide states that in addition to the recommendations listed under Section 3.5 for Level I, II and III personnel, the candidate should be a high school graduate or have earned a General Education Development equivalent of a high school diploma. The education and experience recommendations given in ANSI N45.2.6, section 3.5 will be treated as such, since the Company qualification and certification program is based upon these recommendations, and more significantly, upon satisfactory completion of capability testing prior to certification. Therefore, it is the Company’s position that a candidate should not be required to be a high school graduate or have earned the GED equivalent.

(1)

(2)



Table 17.2-0  
STANDARD, REQUIREMENT OR GUIDE

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

The Company's Position	Conformance Status	Justification
<p>The Operational Quality Assurance Program complies with this guide with the following clarification: See Generic Statement which prefaces this table.</p> <p>(1) With regard to Section 2.5.1 of ANSI N45.2.5-1974, titled <b>Selection</b>: The Company complies with the requirement set forth in the first paragraph of this Section for selection of measuring and test equipment on the basis of sufficient accuracy to determine conformance to the standard's requirements: This is accomplished without the use of calibrated balances or volumetric buckets.</p>	<p>Clarification meets or exceeds applicable guides and standards.</p>	<p>The proposed clarification is used to translate construction oriented documents to operational regulations.</p>

(2) Insert 14

(4)

Revision 38 09/03/02  
Revision 34 09/03/02

NAPS UFSAR  
SPS UFSAR

17.2-88

Insert 14

(2) N 45.2.5, Section 4 titled "Inspection of Concrete Construction" and Section 5 titled "Inspection of Steel Construction": inspections will be implemented as set forth in Section 17.2.10 of the Operational QA Program. The inspection program will incorporate, as determined by a qualified engineer or a Discipline Level III inspector, those items listed in these sections.

(4)



Table 17.2-0  
STANDARD, REQUIREMENT OR GUIDE

**Regulatory Guide 1.116 — *Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems* - (Rev. 0-R, 6/76) - Endorses ANSI N45.2.8-1975**

The Company's Position	Conformance Status	Justification
The Operational Quality Assurance Program complies with this guide with the following clarification: See Generic Statement which prefaces this table.	Clarification meets or exceeds applicable guides and standards.	The proposed clarification is proposed as a construction to operations device.

(1) Insert 15

~~Revision 38~~ 09/03/02  
~~Revision 34~~ 09/03/02

(4)

NAPS UFSAR  
 SPS UFSAR

17.2-89

Insert 15

(1) N 45.2.8, Section 4.4 titled "Inspections", will be implemented as set forth in Section 17.2.10 of the Operational QA Program. The inspection program will incorporate, as determined by a qualified engineer or a Discipline Level III inspector, those items listed in this section.

(4)

**Attachment 3**

**Proposed Topical Report**

**Dominion  
Surry and North Anna Power Stations  
Units 1 and 2**



#### 17.2.2.6 Qualification of Other Support Personnel

The Quality Inspection Coordinator (QIC) responsible for certifying maintenance and modification inspection personnel, and the Supervisor Material Verification responsible for certifying material verification and vendor surveillance personnel shall have the following education and experience and be certified as an Administrative Level III.

1. Six years of satisfactory performance as a Level II in any inspection, examination or test category or class, or
2. High school graduation plus ten years of related experience in inspection, examination, or testing activities associated with nuclear facilities; or high school graduation plus eight years of related experience in inspection, examination, or testing activities associated with nuclear facilities, with at least two years as a Level II, or
3. Four-year college graduation plus five years of related experience in inspection, examination, or testing activities associated with nuclear facilities.

The following are examples of related experience in inspection, examination, or testing activities associated with nuclear facilities: VT 1, 2 or 3, ASME Section XI Inspections, IST (Pumps and Valves), Non-destructive Examination, etc.

The Administrative Level III may be certified by either a discipline Level III or the cognizant management in accordance with Table 17.2-0 clarification of Regulatory Guide 1.58 requirements. Re-evaluation of the Administrative Level III will be consistent with the requirements in ANSI N45.2.6, in that the Administrative Level III will be re-evaluated on a three-year frequency. The re-evaluation will be based on satisfactory performance of duties required for maintaining the inspection program under his supervision.

Where the term "qualified engineer" is used in reference to inspection program activities, the engineer shall meet the requirements of Engineer in Charge per Regulatory Guide 1.8 (ANSI 3.1 Draft 12/79) as clarified in Table 17.2-0: (1) Bachelor's Degree in Engineering or related sciences, (2) Six years of professional level experience in nuclear services, nuclear plant operation, or nuclear engineering, and the necessary overall nuclear background to determine when to call consultants and contractors for dealing with complex problems beyond the scope of the owner-organization expertise, and (3) Training as required by ANSI 3.1 Section 5.3.1.

The Manager Vendor Quality shall have a four-year accredited engineering or science degree, or equivalent with a minimum of two years overall experience or equivalent training in power plant operations. At least one year of this experience shall be involved in nuclear power station quality assurance program implementation.

Replacement personnel in the key positions listed will meet or exceed the applicable requirements of ANSI/ANS 3.1 (Draft 12/79) as clarified in Table 17.2-0.

#### **17.2.2.7 Certification of Nuclear Oversight Personnel**

The certification of Nuclear Oversight personnel is accomplished in accordance with the Quality Assurance Certification Program. This program provides for the certification and recertification of auditors and lead auditors.

The program outlines the qualification and certification requirements for personnel and requires the individual to be certified prior to performing specified audit functions. Nuclear Oversight management has the responsibility to certify audit personnel.

#### **17.2.2.8 Certification of Other Support Personnel**

The certification of maintenance and modification inspection personnel [i.e., Quality Maintenance Team (QMT) and station Quality Control inspectors], Material Verification personnel, Vendor Surveillance personnel, Fuel Accountability and Inspection personnel, and Inservice Testing [Visual Test (VT)] personnel is accomplished in accordance with the approved certification programs.

These programs outline the qualification and certification requirements of personnel and require the individual to be certified prior to performing specified functions. Nuclear Training has the responsibility to train maintenance and modification inspection personnel using lesson plans approved by an ANSI N45.2.6 Discipline Level III inspector or qualified engineer. The Supervisor Material Verification will train material verification and vendor surveillance personnel using lesson plans approved by a Discipline Level III inspector or qualified engineer. The Administrative Level III (Quality Inspection Coordinator (QIC) for maintenance and modification inspection personnel, and the Supervisor Material Verification for material verification and vendor surveillance personnel) has the responsibility to administer the program to qualify and certify inspection personnel. This includes the Administrative Level III's selection of an appropriate Level II inspector (with a minimum of 2 years inspection experience) or qualified engineer to review Job Performance Measures (JPM). Evaluation of the adequacy of specific programs used to train and test inspection personnel and approval of technical changes to the approved Quality Inspection Program shall be performed by a Discipline Level III inspector or a qualified engineer.

#### **17.2.3 Design Control**

Nuclear Standards describe the design control program. Measures are established to assure that applicable regulatory requirements and the nuclear power station design bases are correctly translated into the Company specifications, drawings, procedures, and instructions applicable to design changes and/or modifications for the operating nuclear power station.

All design changes and/or modifications to safety-related structures, equipment, systems and components described in the UFSAR are reviewed, approved, and acted upon by the Station Nuclear Safety and Operating Committee in accordance with their responsibilities and functions as referenced in the Technical Specifications for Surry Power Station and Appendix C of this

may review any procedure revisions that do not require a Regulatory Evaluation (Reference SPS TS 6.1 and Appendix C to this Topical Report).

#### **17.2.6 Document Control**

Measures are established and documented within the operating nuclear power stations and at Innsbrook Technical Center describing the control of documents, such as procedures, instructions, and drawings, to provide for their review, approval, and issue, and changes thereto, prior to release and to assure they are adequate and the quality requirements are stated. Provisions call for, among other things, (1) the review and approval of all new station procedures and design changes prior to release, the review and approval of all changes/revisions to station procedures and all proposed changes or modifications to plant systems or equipment that affect nuclear safety by the Station Nuclear Safety and Operating Committee, (2) policy and procedures for issuance of and changes to station drawings and approval of changes, and (3) the maintenance and distribution of these procedures. Normally changes to documents are reviewed and approved by the same organizations that performed the original review and approval; however, this responsibility may be delegated to other qualified responsible organizations. Approved changes are incorporated into procedures and drawings and other appropriate documents associated with the change. Procedures and drawings and changes thereto are processed, distributed and controlled. The station maintains a record of all holders of procedures and drawings and an index of all procedures and drawings, listing the current revision date. Instructions require that a copy of the appropriate procedure be available at the activity location prior to the commencement of that activity. These measures are addressed in the Technical Specifications for Surry Power Station and Appendix C of this topical report for North Anna Power Station as well as in Administrative Procedures for each station.

Administrative procedures list certain documents that require strict administrative control for distribution, revision, and routing. These documents are categorized as "Controlled Documents." Examples of controlled documents are: Station Procedures, Station Drawings, and the Precautions, Limitations, and Setpoint Document. Also set forth are the distribution and controlling procedures for design and procurement documents. Maintenance and modification inspection activities may ensure that the worker has verified that the current procedures are being used to accomplish work. The workers themselves, however, have the ultimate responsibility to ensure they have the latest revision of the document they are using.

#### **17.2.7 Control of Purchased Material, Equipment, and Services**

An evaluation of suppliers is performed prior to contract award, except in emergency situations where an item or service is needed to preclude development or deterioration of an unsafe condition at the plant, by one or more of the following: (1) A review of the supplier's capability to comply with the elements of 10 CFR 50, Appendix B that are applicable to the type of material, equipment, or service being procured, (2) A review of previous records and performances of suppliers who have provided similar articles of the type being procured, (3) A

Organization to address the requisite quality attributes of this function. Verification of this activity is performed under the supervision of the Director Nuclear Oversight.

#### **17.2.8 Identification and Control of Materials, Parts, and Components**

Installed components at the nuclear power station are adequately identified and substantiated with documented records by the Architect-Engineer and the NSSS Vendor during the construction phase of the station. These identifications and records are maintained in the station files.

Replacement materials, parts, and components including partially fabricated subassemblies are adequately and properly identified to allow control and traceability to pertinent quality assurance records such as drawings, specifications, purchase orders, manufacturing and inspection documents, deviation reports, and physical and chemical mill test reports. The identification system is consistent, as practical, with that used during the construction of the station, with similar identification used during design change activities. The location and method of identification do not affect the function or quality of the item being identified. Verification of correct identification of safety-related materials, parts, and components is required and documented prior to the release for fabrication, assembling, shipping, or installation.

Maintenance and modification inspection activities may be used to provide additional assurance that materials, parts, and components utilized at the nuclear station are appropriately identified and controlled.

#### **17.2.9 Control of Special Processes**

The control of special processes is maintained and implemented through the use of procedures, technique sheets, travelers and inspection verification reports, and personnel qualified in accordance with the applicable codes, specifications, and standards for the specific work. In instances where the Company assigns such work to contractors, the contractor must submit their procedures and personnel qualifications to the Company for approval prior to the start of work.

Special processes include, for example, those involving welding, heat treating, non-destructive testing, cadwelding, removal of undesirable substances during shop and site cleaning, degreasing and flushing, and verification of wall thickness of valves and other cast components important to nuclear safety.

Procedures and personnel are qualified in accordance with applicable specifications, codes, and standards. The Company conducts inspections of work involving special processes to assure that workmanship is in compliance with applicable specifications, codes, and standards.

Records of procedures, equipment, and personnel qualification are maintained and kept current in accordance with the provisions of Section 17.2.17 herein.

### 17.2.10 Inspection

Procedures for those activities affecting quality have been established. These procedures include the inspection and documentation of activities relating to repairs, modifications, and changes made to safety-related systems, structures, and components. These written maintenance and modification procedures include inspection hold points where necessary. When hold points are required, the procedures will either contain or reference the information required to perform the inspection. This information will include, as applicable, objectives, acceptance criteria, prerequisites, special or limiting conditions, additional procedures required, special equipment or calibrations. Inspections, measurements, or tests that require witnessing are identified as "inspection hold" points in procedures. The inspection performed at a hold point is specific in nature; quality characteristics and acceptance/rejection criteria are included or qualitative criteria such as operability checks, compliance with procedural steps, or cleanliness instructions are specified. Signature or initials on the written procedure form document the inspection.

Examinations, measurements, or tests of materials or components associated with safety-related equipment and systems are performed for each work operation, where necessary, to assure quality. If inspection is impossible or inappropriate, indirect control by monitoring methods, equipment, and personnel is provided. Both methods are provided when control is inadequate without both.

The station maintenance procedures are reviewed by the Quality Inspection Coordinator to determine the need for independent inspection and the degree and method if such an inspection is required. Modification and special procedures are reviewed by the design authority and the Quality Inspection Coordinator to determine the need for an independent inspection. For non-routine maintenance/modification work activities on safety-related components the following Regulatory Guides and ANSI standards will be utilized for determining inspection hold points as determined by a Discipline Level III or qualified engineer, with clarifications as noted in Table 17.2-0: Reg. Guide 1.30 (N45.2.4-1972), Reg. Guide 1.94 (N45-2.5-1974), Reg. Guide 1.116 (N45.2.8-1975) and Reg. Guide 1.54 (N101.4-1972). Non-routine maintenance is defined as maintenance which is both infrequently performed (once in the life of the plant) and requires special procedures. The QIC will determine if a maintenance procedure, for infrequently performed maintenance, is to be considered non-routine for establishing hold points.

Inspection hold points for routine maintenance will be placed in technical procedures where necessary to assure quality. Routine maintenance is defined as maintenance activities required to preserve or restore plant systems, structures, and components to their approved design configuration. For safety related welding and civil activities (concrete, grout, soils, coatings and structural steel) inspections will be conducted as required by the applicable codes and standards. Inspections for routine maintenance may be conducted by peer inspections using independent or simultaneous verification, or by qualified inspection personnel. The determination of these inspection hold points and the type of inspection to be performed will be based on Engineering Specifications or other Engineering documents (Installation Specifications, Corporate Weld

Manual, Engineering Transmittal etc.) The Quality Inspection Coordinator, Engineering, or Management may request additional hold points.

Maintenance and modification inspection personnel perform physical inspections as indicated by the controlling procedure to ensure quality requirements are met. Random inspections of maintenance, modification and testing activities may be performed as determined by a qualified engineer or the QIC. These personnel and other inspectors are qualified in accordance with codes and standards as applicable to the function they are performing.

The inspection program requires that inspectors be assigned as appropriate for the activity being inspected. An inspector may be a member of the organization performing the activity. However, they must be qualified and shall not be the person performing the activity or the supervisor directly responsible for the activity. Maintenance and modification inspection personnel are under the administrative direction of the Quality Inspection Coordinator when performing Quality Control inspections. Personnel so assigned shall become familiar with the procedure being used and other pertinent documents such as technical manuals and drawings prior to performing the inspection.

Personnel responsible solely for the conduct of non-destructive examination are qualified to SNT-TC-1A as referenced by Table IWA-1600-1 of the applicable Code. In addition, personnel who conduct inservice or preservice examinations meet the additional and/or alternative qualification requirements specified by IWA-2300 for the applicable examination method and qualification level. Maintenance and modification inspection personnel, Material Verification personnel, Fuel Accountability and Inspection personnel, and Vendor Surveillance personnel meet the qualification requirements of ANSI N45.2.6-1978, as clarified in Table 17.2-0 under NRC Regulatory Guide 1.58. The inspectors' qualifications are periodically reviewed for recertification.

Generally, all physical inspections are under the control of the on-site organization. However, the Site Vice President is authorized to request assistance as required from Corporate support organizations.

The inspection of nuclear fuel and related items is controlled in accordance with procedures that have been developed by Nuclear Analysis and Fuel to address the requisite quality attributes of this function.

Additionally, inspection activities pertaining to Design Control (Section 17.2.3); Procurement Document Control (Section 17.2.4); Test Control (Section 17.2.11); Nonconforming Materials, Parts, or Components (Section 17.2.15); and Corrective Action (Section 17.2.16) shall be controlled in accordance with provisions established for this function in the referenced sections contained herein.

been developed by Nuclear Analysis and Fuel to address the requisite quality attributes of this function.

#### **17.2.16 Corrective Action**

Corrective action measures are established as an integral part of the processing and resolving of non-conformances and failures in service. Through these measures, assurance is confirmed that significant adverse quality conditions are identified, documented, their cause determined, and the corrective actions have been taken that preclude repetition of the adverse quality conditions. Verification of the proper implementation of corrective action measures and close-out of corrective action documentation is assured through the monitoring effort of the station staff and the audits conducted by Nuclear Oversight. Adverse conditions significant to quality, the cause of the conditions, and the initiation of corrective action are reported to appropriate levels of both offsite and onsite management by use of Deviation Reports and audit findings. If further corrective action is required the appropriate management program for performing, tracking and closing the issue will be used.

Nuclear Engineering maintains a program to evaluate complex design concerns that may lead to adverse quality conditions at the nuclear stations. The Potential Problem Reporting (PPR) system allows for detailed, multidiscipline reviews of complex design concerns that may yield station deviation reports. Many design concerns cannot be determined to be adverse to quality until a detailed design review is performed. The PPR process controls this activity as part of the Nuclear Design Control Program.

The procedures for processing a Deviation Report require that each adverse condition significant to quality be categorized as either requiring a Licensee Event Report, Special Report or NRC Notification or as a non-reportable deviation. Non-reportable deviation refers to deviations not reportable to the Nuclear Regulatory Commission. The reporting requirements differ for each of the categories of deviation but require the appropriate levels of management be notified in each case.

Procedures require that corrective maintenance of nuclear safety-related material, parts, or components be documented on a Work Order. Maintenance and modification inspection personnel are contacted prior to the commencement of maintenance activities which require them to perform an inspection in order to allow for adequate preparation. Also, Nuclear Oversight audits completed Work Orders to assure maintenance performed was properly documented, maintenance procedures were properly signed off and check lists were completed if applicable, Technical Specification limits were met if applicable, materials used were documented, and Work Orders were being adequately reviewed by appropriate supervisory personnel.

Rework or repair of nuclear safety-related materials, parts, components, systems, and structures shall be accomplished in accordance with approved written procedures. New procedures for rework or repair of safety-related equipment are approved by the Station Nuclear Safety and Operating Committee to ensure provisions for an adequate inspection of the completed

rework or repair. Procedure revisions containing intent changes to Hold Points must be made in accordance with inspection program requirements. Hold points required to be performed by the inspection program may only be removed with approval of a Discipline Level III inspector or a qualified engineer. The cognizant supervisor reviews the completed procedures to insure the acceptance criteria have been satisfied and for the completeness of the post-maintenance check-out.

The Quality Inspection Coordinator (QIC) or qualified engineer determines the scope of the required inspection effort on the basis of the extent of modifications or repair to safety-related equipment, systems, or components and verifies the work procedures contain the proper inspection hold points as required by the inspection program. For some repairs and modification activities, pre-job briefings held by station personnel in accordance with applicable administrative procedures may be attended by maintenance and modification inspection personnel at the discretion of the Quality Inspection Coordinator. For *major evolutions*, such as refueling, steam generator modifications, etc., inspection activities will be planned and coordinated as directed by a qualified engineer or the Quality Inspection Coordinator.

#### 17.2.16.1 Authority to Stop Work

Nuclear Oversight and Quality Inspection personnel have the authority, and the responsibility, to stop work in progress which is not being done in accordance with approved procedures or where safety or equipment integrity may be jeopardized. This extends to off-site work performed by vendors furnishing safety-related materials and services to the Company.

#### 17.2.16.2 Imposition of "Stop Work"

- A. **Nuclear Oversight and Quality Inspection Personnel** - The Nuclear Oversight representative or maintenance or modification inspector advises the cognizant supervisor or supervisory personnel to stop work in progress whenever he determines that it is not being conducted in accordance with applicable procedures, instructions, guides, or standards or may jeopardize the safe operation of the station. Nuclear Oversight representatives inform the Manager Nuclear Oversight of the stop work order. The maintenance or modification inspector informs the Quality Inspection Coordinator and the Manager Nuclear Oversight of the decision to stop work. The Manager Nuclear Oversight or the Quality Inspection Coordinator then notifies the Site Vice President of the decision to stop work because of adverse quality conditions. He shall also notify the Director Nuclear Oversight.
- B. **Site Vice President** - The Site Vice President evaluates the determination to stop work.
  1. If he concurs with the decision to stop work, he initiates the necessary corrective action. Only after the discrepancy has been corrected and the corrective action approved by the initiating organization does work resume.

Table 17.2-0

CONFORMANCE OF THE COMPANY'S OPERATIONAL QUALITY ASSURANCE  
PROGRAM TO NRC REGULATORY GUIDES AND ANSI STANDARDS

The ANSI standards, and other documents (i.e., other standards, codes, regulations, or appendices) that are required to be included as a part of this quality assurance program are either identified in Table 17.2-0 or they are described herein. Although this table includes references to ANSI Standards and Regulatory Guides that are required to be a part of this quality assurance program, the table is not intended to be a complete list of all NRC Regulatory Guides (etc.) to which the Company is committed. The specific applicability or acceptability of these listed standards, codes, regulations, or appendices is either covered in this program or such documents are not considered as quality assurance program requirements; although they may be used as guidance. When sections of ANSI Standards and other documents are referenced within this program, it is understood that the Company will comply with the referenced sections as clarified in Table 17.2-0.

GENERIC STATEMENTS WITH REGARDS TO TABLE 17.2-0  
AND THE OPERATIONAL QUALITY ASSURANCE PROGRAM

For operations phase maintenance and modification activities which are comparable in nature and extent to similar activities conducted during the construction phase, the Company shall control these activities under this Operational Quality Assurance Program. Designated modifications may be controlled under a contractor's Quality Assurance Program which has been approved by the Company's Quality Assurance Program. When this Operational Quality Assurance Program or an approved contractor's Quality Assurance Program is used, the Company shall comply with the *Regulatory Position* established in the guides listed herein in that quality assurance programmatic/administrative requirements included therein (subject to the clarification in this table) shall apply to these maintenance and modification activities even though such requirements may not have been in effect originally. Maintenance or modifications which may affect the function of safety related structures, systems, or components shall be performed in a manner at least equivalent to that specified in original design bases and requirements and materials specifications. Maintenance and modification inspections shall be performed in accordance with inspection requirements set forth in Section 17.2.10. A suitable level of confidence in structures, systems, or components on which maintenance or modifications have been performed shall be attained by appropriate inspection and performance testing.

*Definitions* in the referenced standards in this table which are not included in ANSI N45.2.10 will be used as clarified in the Company's commitment to Regulatory Guide 1.74.

Table 17.2-0 (continued)  
STANDARD, REQUIREMENT OR GUIDE

**Regulatory Guide 1.30** (continued) — *Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment (8/72)*. Endorses ANSI N45.2.4-1972

The Company's Position	Conformance Status	Justification
<p>Section 5.1 — <b>Inspections:</b> including subsections 5.1.1, 5.1.2, and the first sentence in 5.1.3, will be implemented as set forth in Section 17.2.10 of the Operational QA Program. The inspection program will incorporate, as determined by a qualified engineer or Discipline Level III inspector, those items listed in these subsections. The remaining sentence in 5.1.3 is covered in equivalent detail in the Company's commitment to ANSI N18.7, section 5.2.6; the requirements as set forth in that commitment will be implemented in addition to the requirements stated here.</p> <p>Section 5.2 — <b>Tests:</b> including subsections 5.2.1 through 5.2.3, will be implemented as set forth in Sections 17.2.3 and .11 of the Operational QA Program. The test program will consider the elements outlined in this Section, as determined by station management, when developing test requirements for inclusion in maintenance and modification procedures. In some cases, testing requirements may be met by post-installation surveillance testing in lieu of a special post-installation test. Where elements of Section 5.2 are not being met they shall be documented and justified.</p> <p>(4) Section 6 — <b>Post Construction Verification:</b> is not generally considered applicable at operating facilities because of the scope of work and the relatively short interval between installation and operation. Where considered necessary by station management, the elements described in this section will be used in the development and implementation of inspection and testing programs as described in Sections 17.2.3, 17.2.10, and 17.2.11 of the Operational QA Program.</p>		

Table 17.2-0 (continued)  
STANDARD, REQUIREMENT OR GUIDE

<b>Regulatory Guide 1.33 — <i>Quality Assurance Requirements (Operation)</i> (Rev. 2, 2/78) - Endorses ANSI N18.7-1976</b>		
The Company's Position	Conformance Status	Justification
<p>The Operational Quality Assurance Program complies with this guide with the following clarifications and alternatives:</p> <p>(1) Paragraph C.2 of Regulatory Guide 1.33 discusses referenced standards and applicable Regulatory Guides as being included in the requirements of ANSI N18.7-1976. Section 5.2.7 of ANSI N18.7-1976, Maintenance and Modifications, references ANSI N101.4-1972 <i>Quality Assurance for Protective Coating Applied to Nuclear Facilities</i> (Regulatory Guide 1.54 Rev. 0, 1973) as a standard to be used for modification activities similar in nature to related activities occurring during initial plant design and construction. Applicability and implementation of Regulatory Guide 1.54 Rev. 0, including quality inspection requirements, for modifications will be determined, as needed, by a qualified engineer.</p> <p>(2) Paragraph C.3 (<i>Subjects Requiring Independent Review</i>) of Regulatory Guide 1.33 (and Section 4.3.4 of ANSI N18.7-1976 which it references) will be implemented as required by the applicable nuclear facility Technical Specifications, Emergency Plan, Security Plan, and Fitness for Duty Program which designate the areas subject to independent reviews.</p>	<p>Clarifications and alternatives meet or exceed applicable guides and standards.</p>	<p>These clarifications are required to ensure that QA program continuity is maintained; i.e., that only one standard or guide is committed to for a particular topic.</p>

Table 17.2-0 (continued)  
 STANDARD, REQUIREMENT OR GUIDE

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

The Company's Position	Conformance Status	Justification
<p>(12) With regard to Section 5.2.7 of ANSI N18.7-1976, titled <b>Maintenance and Modification:</b> The first sentence in the first paragraph states in part that "maintenance and modifications which may affect functioning of safety-related structures systems and components shall be performed in a manner to ensure quality at least equivalent to that specified in original...inspection requirements." In addition, ANSI N18.7 Section 5.2.17, third paragraph, references this section and states that "for modifications and non-routine maintenance, inspections shall be conducted in a manner similar (frequency, type, and personnel performing such inspections) to that associated with construction phase activities." For non-routine maintenance and modification inspections, the Company will meet this requirement by performing inspections in accordance with the inspection requirements contained in the ANSI standards and Regulatory Guides (as clarified by Table 17.2-0) listed in the fourth paragraph of ANSI N18.7 Section 5.2.7. For routine maintenance activities, the Company will meet this requirement through Engineering direction (Section 17.2.10).</p>		

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Table 17.2-0 (continued)  
STANDARD, REQUIREMENT OR GUIDE

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

The Company's Position	Conformance Status	Justification
<p>(15) With regard to Section 5.2.13.1 of ANSI N18.7-1976, titled <b>Procurement Document Control</b>: The words "the same degree of control" in the last sentence are replaced with "Engineering review."</p>		
<p>(16) With regard to Section 5.2.15 of ANSI N18.7-1976, titled <b>Review, Approval and Control of Procedures</b>: The third sentence in paragraph three is interpreted to mean: Applicable procedures, as determined by Station Management, shall be reviewed following an accident, an unexpected transient, significant operator error or equipment malfunction.</p> <p>The first sentence of the fourth paragraph is considered to be met via procedure reviews as described by administrative procedures. Additional procedure review, approval, and control requirements/exceptions are discussed in Section 17.2.5. above.</p>		<p>The <b>biennial</b> review requirement is deleted. The procedures upgrade program provides a systematic and effective process for developing and revising procedures which encompasses the intent of the biennial review.</p>
<p>(17) With regard to Section 5.2.17 of ANSI N18.7-1976, titled <b>Inspections</b>: Not all inspections will require generation of a separate inspection report. Inspection requirements and guidance may be integrated into appropriate work procedures or other documents with the procedure or document serving as the record. However, records of inspections will be identifiable and retrievable.</p>		
<p>(18) With regard to Section 5.3.9 of ANSI N18.7-1976, titled <b>Emergency Procedure</b>: As directed by the NRC, the Company follows a format for emergency procedures which is "symptom" based as opposed to "event" based as stipulated in Section 5.3.9.1. Since the Company has these "symptom" based procedures; "event" based procedures are not normally provided.</p>		

Table 17.2-0 (continued)  
STANDARD, REQUIREMENT OR GUIDE

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

The Company's Position	Conformance Status	Justification
<p>(4) With regard to Section 3.1 of ANSI N45.2.6-1978, titled <b>General</b>: The Company will implement the requirements of this Section with the addition of an Administrative Level III position and the use of qualified engineers.</p> <p>(5) With regard to Section 3.3 of ANSI N45.2.6-1978, titled <b>Level II Capabilities</b>: The paragraph states that a Level II qualified person shall have demonstrated experience in certifying lower level qualified persons. The Company does not use Level II qualified persons for certification of inspectors, and does not require Level II qualified persons to demonstrate this capability. However, the Company may use Level II personnel (with a minimum of two years experience in inspection) to support this process by assisting with the implementation of the training program including the administration of Job Performance Measures (JPM) for qualification of Level I, II and III inspectors.</p>		

Table 17.2-0 (continued)  
STANDARD, REQUIREMENT OR GUIDE

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

The Company's Position	Conformance Status	Justification
<p>(6) With regard to Section 3.4 of ANSI N45.2.6-1978, titled <b>Level III Personnel Capabilities</b>: The first sentence states that a Level III qualified person shall have all the capabilities of a Level II qualified person for the inspection, examination or test category or class in question. For maintenance and modification, material verification and vendor surveillance inspectors, the Company will qualify Level III persons without the actual hands on experience and capability to perform specific inspections, examinations or tests required of a Level I or II qualified person, and utilize these persons (Administrative Level III) for administrative and supervisory functions including certifying persons at the same or lower level. The second sentence states in part that the Level III shall be capable of evaluating the adequacy of specific programs used to train and test inspection, examination, and test personnel whose qualifications are covered by this standard. For maintenance and modification, material verification and vendor surveillance inspectors, the Company will utilize a Discipline Level III or qualified engineer for evaluating the adequacy of specific programs used to train and test inspection, examination and testing personnel. The Administrative Level III will administer the approved program.</p>		

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17.2-80

Table 17.2-0 (continued)  
STANDARD, REQUIREMENT OR GUIDE

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

The Company's Position	Conformance Status	Justification
<p>(7) With regard to Section 3.5.3 of ANSI N45.2.6-1978, titled <b>Education and Experience - Recommendations, Level III:</b> the Company will utilize the following requirements for Administrative Level III personnel.</p> <ol style="list-style-type: none"> <li>1. Six years of satisfactory performance as a Level II in any inspection, examination or test category or class, or</li> <li>2. High school graduation plus ten years of related experience in inspection, examination, or testing activities associated with nuclear facilities; or high school graduation plus eight years of related experience in inspection, examination, or testing activities associated with nuclear facilities, with at least two years as a Level II, or</li> <li>3. Four-year college graduation plus five years of related experience in inspection, examination, or testing activities associated with nuclear facilities.</li> </ol> <p>The following are examples of related experience in inspection, examination, or testing activities associated with nuclear facilities: VT 1, 2 or 3, ASME Section XI Inspections, IST (Pumps and Valves), Non-destructive Examination, etc.</p>		

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17.2-81

Table 17.2-0 (continued)  
STANDARD, REQUIREMENT OR GUIDE

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

The Company's Position	Conformance Status	Justification
<p>(8) With regard to Section 4 of ANSI N45.2.6-1978, titled <b>Performance</b> and associated Table 1, <b>Minimum Levels of Capability for Project Functions</b>; Paragraph 4 states that personnel who are assigned the responsibility and authority to perform functions covered by this Standard shall have, as a minimum, the level of capability shown in Table 1. The Administrative Level III will perform the last four Project Functions listed for the Level III (as clarified herein); Supervising equivalent or lower level personnel, evaluating the results of specific programs used to train and test inspection, examination and testing personnel and qualifying same or lower level personnel. A Discipline Level III or qualified engineer will evaluate the adequacy of the specific programs used to train and test the inspection, examination and testing personnel. A Level II (with a minimum of two years of inspection experience) or a qualified engineer will be used for administration of Job Performance Measures (JPM). The Administrative Level III may be certified by either a discipline Level III or the cognizant management in accordance with the requirements set forth in this document. Re-evaluation of the Administrative Level III will be consistent with the requirements in ANSI N45.2.6, in that the QIC will be re-evaluated on a three-year frequency. The re-evaluation will be based on satisfactory performance of duties required for maintaining the inspection program.</p>		

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17.2-82

Table 17.2-0 (continued)  
STANDARD, REQUIREMENT OR GUIDE

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

The Company's Position	Conformance Status	Justification
<p>The third project function, planning inspections, may also be performed by the Administrative Level III. The Administrative Level III will plan inspections based on the approved Inspection Program which has been approved by Discipline Level III inspectors and qualified engineers.</p> <p>The seventh project function, qualifying lower level personnel, will be modified by noting that the Company may use Level II personnel (with a minimum of two years experience in inspection) to administer Job Performance Measures (JPM) for qualification of Level I, II and III inspectors.</p> <p>(9) With regard to Regulatory Guide 1.58, Position C.6 referencing ANSI N45.2.6 Section 3.5, <b>Education and Experience - Recommendations:</b> The Reg. Guide states that in addition to the recommendations listed under Section 3.5 for Level I, II and III personnel, the candidate should be a high school graduate or have earned a General Education Development equivalent of a high school diploma. The education and experience recommendations given in ANSI N45.2.6, Section 3.5 will be treated as such, since the Company qualification and certification program is based upon these recommendations, and more significantly, upon satisfactory completion of capability testing prior to certification. Therefore, it is the Company's position that a candidate should not be required to be a high school graduate or have earned the GED equivalent.</p>		

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Table 17.2-0  
STANDARD, REQUIREMENT OR GUIDE

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

The Company's Position	Conformance Status	Justification
<p>The Operational Quality Assurance Program complies with this guide with the following clarification: See Generic Statement which prefaces this table.</p> <p>(1) With regard to Section 2.5.1 of ANSI N45.2.5-1974, titled <b>Selection</b>: The Company complies with the requirement set forth in the first paragraph of this Section for selection of measuring and test equipment on the basis of sufficient accuracy to determine conformance to the standard's requirements: This is accomplished without the use of calibrated balances or volumetric buckets.</p> <p>(2) N45.2.5, Section 4 titled <b>Inspection of Concrete Construction</b> and Section 5 titled <b>Inspection of Steel Construction</b>: inspections will be implemented as set forth in Section 17.2.10 of the Operational QA Program. The inspection program will incorporate, as determined by a qualified engineer or a Discipline Level III inspector, those items listed in these sections.</p>	<p>Clarification meets or exceeds applicable guides and standards.</p>	<p>The proposed clarification is used to translate construction oriented documents to operational regulations.</p>

Table 17.2-0  
STANDARD, REQUIREMENT OR GUIDE

**Regulatory Guide 1.116** — *Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems* - (Rev. 0-R, 6/76) - Endorses ANSI N45.2.8-1975

The Company's Position	Conformance Status	Justification
<p>The Operational Quality Assurance Program complies with this guide with the following clarification: See Generic Statement which prefaces this table.</p> <p>(1) N45.2.8, Section 4.4 titled <b>Inspections</b>, will be implemented as set forth in Section 17.2.10 of the Operational QA Program. The inspection program will incorporate, as determined by a qualified engineer or a Discipline Level III inspector, those items listed in this section.</p>	<p>Clarification meets or exceeds applicable guides and standards.</p>	<p>The proposed clarification is proposed as a construction to operations device.</p>