

July 30, 2004

U. S. Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555-0001

Subject: Duke Energy Corporation
Oconee Nuclear Station, Units 1, 2, and 3, Docket Nos. 50-269, 50-270, 50-287
McGuire Nuclear Station, Units 1 and 2, Docket Nos. 50-369, 50-370
Catawba Nuclear Station, Units 1 and 2, Docket Nos. 50-413, 50-414
Submission of Duke Energy Topical Report, Duke -1-A, Amendment 33
(TAC Nos. MB7166, MB7167, MB7168, MB7169, MB7170, MB7171, MB7172)

By letter dated December 18, 2002, Duke Energy Corporation (Duke) submitted Amendment 32 to its Duke Energy Topical Report, Duke-1-A, on the Quality Assurance (QA) Program for the Oconee, McGuire, and Catawba Nuclear Stations. On both April 4, 2003 and July 10, 2003, the NRC requested additional information concerning this amendment. Duke responded to the two requests on April 24, 2003 and October 16, 2003, respectively. That amendment and requests for additional information primarily focused on the use of process monitoring for certain inspection activities.

A meeting between Duke personnel and NRC Staff was held on April 8, 2004 to discuss Amendment 32 resulting in the NRC Summary of the meeting dated April 16, 2004. Subsequently, on June 1, 2004, the NRC Staff held a conference call with Duke to discuss the status of the request to implement Amendment 32 to the Duke QA Topical Report. The NRC staff requested this call in order to identify additional items resulting in the Telecon Summary of June 28, 2004.

On June 3, 2004, Duke submitted the alternative Amendment 32 to Duke QA Topical which reflected organizational, administrative, and editorial changes.

After consideration of the preceding interactions with the NRC staff and the submittal of Amendment 32 in June, Duke has prepared Amendment 33 (attached) that revises the 2002 submittal content concerning Section 17.3.2.12 "Inspections" of the QA Topical. In accordance with 10CFR50.54(a), Duke has completed detailed evaluations of each of the changes contained therein and has determined they are consistent with the requirements of 10CFR50 Appendix B and guidance established by Nuclear Regulatory Guide, 1.33 Rev. 2 – *Quality Assurance Program Requirements (Operations)*.

The evaluation of the December 2002 submittal concluded that the changes to the QA Topical contained a reduction in commitments. This evaluation was based on the comparison of the then current Duke QA Program to the requirements outlined in the proposed new program. On further evaluation, Duke has revised QA Topical Section 17.3.2.12 "Inspections" to align with the inspection requirements of 10CFR50 Appendix B and ANSI N18.7-1976/ANS-3.2. This alignment demonstrates Duke's compliance with the inspection requirements set forth in these codes and standards.

The summary results of the Duke evaluation for Amendment 33 are in Attachment 1 and provide a description, reason, and basis for each change. Attachment 2 contains Amendment 33. Changes are shown by the use of indicator bars in the margin of affected pages.

Please direct any questions to R. L. Gill at 704 382-3339 or K. S. Isley at 704 382-5019 (E mail: ksisley@duke-energy.com).

Very truly yours,

Henry B. Barron

Attachments

References:

1. Letter, M. S. Tuckman to USNRC, "Nuclear Quality Assurance Program Amendment 32," December 18, 2002
2. Letter, R. E. Martin to M. S. Tuckman, "Duke Energy Corporation Nuclear Quality Assurance Program Request for Additional Information," April 4, 2003
3. Letter, W. R. McCollum to USNRC, "Response to Request for Additional Information Letter Dated April 4, 2003," April 24, 2003
4. Letter, R. E. Martin to M. S. Tuckman, "Re: Nuclear Quality Assurance Program, Amendment 32," July 10, 2003
5. Letter, W. R. McCollum to USNRC, "Response to Request for Additional Information Letter Dated July 10, 2003," October 16, 2003
6. Letter, S. E. Peters to Duke Energy Corporation, "Summary – Meeting with Duke Energy Corporation on Request to Modify the Quality Assurance Program for The Catawba, McGuire, And Oconee Nuclear Stations," April 16, 2004
7. Letter, H. B. Barron to USNRC, "Alternative Submittal of Duke Energy Topical Report, Duke-1-A, Amendment 32," June 3, 2004
8. Telecon Summary of June 1, 2004, "Conference Call Regarding Duke Power Company's Request to Modify the Quality Assurance Program for the Catawba, McGuire and Oconee Nuclear Stations," June 28, 2004

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xc: (with attachments)

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MNS Master File OS 801.01 – MG01S2
CNS Master File OS 801.01 – CN04DM
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Attachment 1
Duke Energy Corporation Topical Report, Duke-1-A
Quality Assurance Program, Amendment 33
Description of Changes

PURPOSE

The purpose of Amendment 33 to the Duke Energy Corporation Topical Report Duke-1-A, *Quality Assurance Program* is to rewrite Section 17.3.2.12 "Inspections" to more closely align with applicable codes and standards. This attachment provides an evaluation of the changes in Amendment 33 to the Duke QA Topical. This evaluation is based on the provisions contained in NRC regulation 10CFR50.54(a).

BACKGROUND

When Amendment 32 was submitted for approval in December 2002, Duke stated that after an evaluation in accordance with 10CFR50.54(a) Amendment 32 was a reduction in commitment. At the time, Duke based this decision on the fact that our QA Topical Report and QA Program were more restrictive than requirements found in ANSI N18.7-1976 and 10CFR50 Appendix B. Duke's concern was the wording in the current QA Topical Report in the area of inspections could be misinterpreted to require original design and inspection requirements for every maintenance activity.

Duke identified the changes as a reduction in commitments when our purpose for revision was to align the Duke QA Program with the necessary codes and standards. In Amendment 33, Duke is not reducing commitments below ANSI N18.7-1976 or 10CFR50 Appendix B Criteria. As shown in the attached Comparison Table, Duke is outlining how the proposed QA Topical Report Section 17.3.2.12 "Inspections" satisfies the requirements of the standards and codes. Furthermore, Duke has revised the wording in the section to eliminate references to routine and non-routine maintenance that were in the original submittal.

DESCRIPTION OF CHANGES

Change 1: An editorial change is made to Table 17-1 "Conformance of Duke's Program to Quality Assurance Standards, Requirements and Guides", page 17-5. For Regulatory Guide 1.58 Rev (1), "ANSI/SNT-CP-189" is added to the second sentence under Remarks to read, "Duke's nondestructive examination personnel will meet the qualification requirements of SNT-TC-1A-1980 *and ANSI/SNT-CP-189.*" This standard was inadvertently left out of Table 17-1.

Change 2: Section 17.3.2.12 "Inspections" has been rewritten and reformatted to reflect a closer alignment with ANSI N18.7-1976/ANS-3.2 and 10CFR50 Appendix B Criteria.

The following table provides a comparison of the current wording found in Duke QA Topical Amendment 32 in Section 17.3.2.12 "Inspections" to the proposed wording found in Amendment 33 along with an evaluation of the basis for the proposed changes.

Column 1 shows the current wording for Duke Topical Report Amendment 32 implemented on June 3, 2004.

Column 2 shows the proposed wording for Duke Topical Report Amendment 33.

Column 3 lists the description, reason, and basis for the proposed changes as evaluated in accordance with 10CFR50.54(a) to ANSI N18.7/ANS-3.2 "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants" and 10CFR50 Appendix B Criteria.

CONCLUSION

Based on the evaluation of the proposed changes to Amendment 33 in accordance with 10CFR50.54(a), Duke has determined the two changes are consistent with the requirements of 10CFR50 Appendix B and guidance established by Nuclear Regulatory Guide, 1.33 Rev. 2, *Quality Assurance Program Requirements (Operations)*. The need for revision of the QA Topical Report was to closer align the Duke Energy QA Program with approved codes and standards, specifically ANSI N18.7-1976/ANS-3.2 and 10CFR50 Appendix B Criteria.

QA Program Amendment 33

Section 17.3.2.12 "Inspection" Comparison Table

	Column 1	Column 2	Column 3
Row	Duke Topical Report Amendment 32 (current)	Duke Topical Report Amendment 33 (proposed)	Description, Reason, and Basis for the Proposed Changes
1	<p>In order to assure safe and reliable operation, a program of inspections for QA Condition 1 structures, systems and components is established at each nuclear station. If inspection of processed material or products is impossible or disadvantageous, indirect control by monitoring processing methods, equipment, and personnel is provided. Both inspection and process monitoring are provided when control is inadequate without both.</p>	<p>In order to assure safe and reliable operation, a program of inspections for QA Condition 1 structures, systems, and components is established at each nuclear station. <i>Inspection procedures for those activities affecting QA Condition 1 structures, systems and components are established by Nuclear Generation personnel.</i></p> <p><i>Independent inspections, examinations, measurements, observations, or tests of materials, products or activities are conducted, where necessary, to assure quality.</i> If inspection of processed material or products is impossible or disadvantageous, indirect control by monitoring processing methods, equipment, and personnel is provided. Both inspection and process monitoring are provided when control is inadequate without both.</p>	<p>Description: Two sentences are added in the first two paragraphs for proposed Amendment 33.</p> <p>Reason: This addition is made to provide more specific expectations concerning activities subject to inspections performed, where necessary, to assure quality.</p> <p>Basis: These changes are consistent with the requirements of N18.7 Section 5.2.7 and Section 5.2.17 and 10CFR50 Appendix B Criterion X.</p>
2	<p>The program addresses:</p> <ul style="list-style-type: none"> a) Inservice inspections required by Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code b) Inspections to verify compliance with cleanliness criteria. c) Inspections to verify compliance with certain instrument and maintenance procedures. d) Inspections to verify conformance of materials, parts, and components received at a nuclear station with applicable specifications and requirements. e) Inspections to verify the integrity of QA Condition 1 structures, systems and components during/or after maintenance and modification. 		<p>Description: In the current topical, the sentence beginning "The program addresses..." has been reformatted and moved to a later paragraph in the proposed topical (see Row 5 in this table).</p> <p>Reason: This change is made for clarification.</p> <p>Basis: The basis for this change is provided in Row 5 of this table.</p>

	Column 1	Column 2	Column 3
Row	Duke Topical Report Amendment 32 (current)	Duke Topical Report Amendment 33 (proposed)	Description, Reason, and Basis for the Proposed Changes
3		<p>Inspection procedures, instructions, and checklists contain the following information or require this information on inspection reports:</p> <ul style="list-style-type: none"> a) Characteristics to be inspected b) Method of inspection c) Measuring and test equipment information d) Responsibility for the inspection e) Acceptance or rejection criteria f) Identification of required procedures, drawings, specifications, etc. g) Signature or initials of inspector h) Record of results of the inspection 	<p>Description: In the proposed topical, the sentence beginning "Inspection procedures, instructions..." has been moved from a later paragraph in the current topical (see Row 7 of this table).</p> <p>Reason: This move is made for clarification.</p> <p>Basis: No technical changes have been made.</p>
4	<p>The personnel performing these inspections are examined and certified in their particular category. Current qualification and certification files are maintained for each inspector. Nondestructive examination inspectors are certified in accordance with ANS/American Society for Non-destructive Testing (SNT-TC-1A, ANSI/SNT-CP-189) recommended practice. Written procedures require the test and certification of inspectors in other categories such as Mechanical, Electrical, and Structural as described in the appropriate quality assurance manual. For cases where inspectors will perform limited functions within a category, they are tested and certified to those limitations. These inspectors are only allowed to perform inspections specifically defined in this limited certification.</p> <p>For inspections of concrete containments, personnel fulfilling the role of Responsible Engineer, shall be a Registered Professional Engineer experienced in evaluating the in-service condition of structural concrete and knowledgeable of the design and construction codes and other criteria used in the design and construction of the concrete containment structure. The Responsible Engineer may also perform inspections as discussed in this section.</p> <p>Certification procedures and certifications are approved by Nuclear Generation Department personnel responsible for these processes. These procedures comply with the requirements of applicable codes and standards.</p>	<p>The personnel performing these inspections are examined and certified in their particular category. Current qualification and certification files are maintained for each inspector. Nondestructive examination inspectors are certified in accordance with ANS/American Society for Non-destructive Testing (SNT-TC-1A, ANSI/SNT-CP-189) recommended practice. Written procedures require the test and certification of inspectors in other categories such as Mechanical, Electrical, and Structural as described in the appropriate quality assurance manual. For cases where inspectors will perform limited functions within a category, they are tested and certified to those limitations. These inspectors are only allowed to perform inspections specifically defined in this limited certification.</p> <p>For inspections of concrete containments, personnel fulfilling the role of Responsible Engineer, shall be a Registered Professional Engineer experienced in evaluating the in-service condition of structural concrete and knowledgeable of the design and construction codes and other criteria used in the design and construction of the concrete containment structure. The Responsible Engineer may also perform inspections as discussed in this section.</p> <p>Certification procedures and certifications are approved by Nuclear Generation Department personnel responsible for these processes. These procedures comply with the requirements of applicable codes and standards.</p>	<p>No changes have been made.</p>

	Column 1	Column 2	Column 3
Row	Duke Topical Report Amendment 32 (current)	Duke Topical Report Amendment 33 (proposed)	Description, Reason, and Basis for the Proposed Changes
5	<p>Modifications, repairs and replacements are inspected in accordance with the original design and inspection requirements, or acceptable alternatives.</p>	<p><i>The inspection criteria for performing inspections are established from codes, specifications, and standards applicable to the activity. Examples of activities subject to inspection include:</i></p> <ul style="list-style-type: none"> a) <i>Activities specified by the ASME Code Section XI</i> b) <i>Special processes</i> c) <i>Modifications</i> d) <i>Maintenance</i> e) <i>Material Receipt</i> <p><i>Inspection requirements for maintenance or modifications are equivalent to the original design and inspection requirements, or acceptable alternatives.</i></p>	<p>The current paragraph has been revised in two areas.</p> <p>First:</p> <p>Description: In the proposed topical, the sentence beginning "The inspection criteria for performing inspections..." is reformatted information that was found in the first paragraph of Section 17.3.2.12 of the current topical (see Row 2 of this table).</p> <p>Reason: This change is made for clarification.</p> <p>Basis: These changes are consistent with the requirements of N18.7 Section 5.2.7 and Section 5.2.17 and 10CFR50 Appendix B Criterion X.</p> <p>Second:</p> <p>Description: In the current topical, the sentence beginning "Modifications, repairs and replacements are inspected..." has been changed.</p> <p>Reason: The sentence in the current topical is more restrictive than inspection requirements found in ANSI N18.7 and 10CFR50 Appendix B and could be interpreted to require original design and inspection requirements for every maintenance activity. In addition, the phrase "repairs and replacements" is changed to "maintenance" and the phrase "in accordance with" is changed to "equivalent to".</p> <p>Basis: These changes are consistent with the requirements of N18.7 Section 5.2.7 and Section 5.2.17. No comparable wording is found in 10CFR50 Appendix B.</p>
6	<p>Mandatory inspection hold points are included in the documents addressing the activities being performed, as necessary, and work does not proceed beyond such hold points until satisfactory completion of the required inspection, disposition of any item not meeting the acceptance criteria, and any required reinspection.</p>	<p>Mandatory inspection hold points are included in the documents addressing the activities being performed, as necessary, and work does not proceed beyond such hold points until satisfactory completion of the required inspection, disposition of any item not meeting the acceptance criteria, and any required reinspection.</p>	<p>No changes have been made.</p>

	Column 1	Column 2	Column 3
Row	Duke Topical Report Amendment 32 (current)	Duke Topical Report Amendment 33 (proposed)	Description, Reason, and Basis for the Proposed Changes
7	<p>Inspection procedures, instructions, and checklists contain the following information or require this information on inspection reports:</p> <ul style="list-style-type: none"> a) Characteristics to be inspected b) Method of inspection c) Measuring and test equipment information d) Responsibility for the inspection e) Acceptance or rejection criteria f) Identification of required procedures, drawings, specifications, etc... g) Signature or initials of inspector h) Record of results of the inspection. 		<p>Description: In the current topical, the sentence beginning "Inspection procedures, instructions..." has been moved to an earlier paragraph in proposed topical (see Row 3 of this table).</p> <p>Reason: This move is made for clarification.</p> <p>Basis: No technical changes have been made.</p>
8	<p>After inspection data is collected and reviewed by the inspector, the reports are technically reviewed by personnel designated to perform that quality assurance function.</p>	<p>After inspection data is collected and reviewed by the inspector, the reports are technically reviewed by personnel designated to perform that quality assurance function.</p>	<p>No changes have been made.</p>
9	<p>Inspection activities involving the supplier quality assurance program are evaluated and approved by the Nuclear General Office, Procurement Quality section.</p>	<p>Inspection activities involving the supplier quality assurance program are evaluated and approved by the Nuclear General Office, Procurement Quality section.</p>	<p>No changes have been made.</p>

Attachment 2

**DUKE ENERGY CORPORATION
TOPICAL REPORT
QUALITY ASSURANCE PROGRAM**

DUKE-1-A

Standard, Requirement or Guide	Conformance Status	Remarks
Regulatory Guide 1.36 Rev. (0) – Nonmetallic Thermal Insulation for Austenitic Stainless Steel	Adopted	Regulatory Guide is adopted for all Austenitic Stainless Steel piping and components located outside containment. Inside containment, reflective Thermal Insulation is used.
Regulatory Guide 1.37 Rev (0) – Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants	Conforms	RG 1.37 Rev (0) incorporates ANSI N45.2.1-1973 for both construction and operation
Regulatory Guide 1.38 Rev (2) – Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water-Cooled Nuclear Power Plants	Alternative	RG 1.38 Rev (2) incorporates ANSI N45.2.2-1972. Duke's program conforms to ANSI N45.2.2-1972 except container markings shall be marked on at least one side (A.3.9(1)) and shall be applied with waterproof ink or paint in characters of a legible size, and caps and plugs for pipe and fittings are required unless specified by Engineering, and off-site inspection, examination, and testing is monitored by personnel qualified to ANSI N45.2.12 in lieu of ANSI N45.2.6.
Regulatory Guide 1.39 Rev (2) – Housekeeping Requirements for Water-Cooled Nuclear Power Plants	Conforms	RG 1.39 Rev (2) incorporated ANSI N45.2.3-1973 for both construction and operation
Regulatory Guide 1.54 Rev (0) – Quality Assurance Requirements for Protective Coatings Applied to Water-Cooled Nuclear Power Plants	Alternative	Catawba has adopted the Regulatory Guide. McGuire and Oconee adopt portions of the Regulatory Guide and address alternatives which meet the intent of this Guide, in each respective Station FSAR.
Regulatory Guide 1.58 Rev (1) – Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel	Alternative	RG 1.58 Rev (1) incorporates ANSI N45.2.6-1978 for both construction and operation. Duke's nondestructive examination personnel will meet the qualification requirements of SNT-TC-1A-1980 and ANSI/SNT-CP-189. Duke's operational/functional testing personnel will meet the requirements of ANSI N18.1-1971 rather than ANSI N45.2.6. Also, Duke's Level I inspectors receive a minimum of 4 months experience as Level I before being certified as Level II, in lieu of one year experience recommended by ANSI N45.2.6. Inspectors are only assigned tasks for which they have been qualified.

17.3.2.11 Special Process Control

The Nuclear Station Manager is responsible for directing the organization and performance of the station's program for the control of special processes, and for assuring the necessary qualified personnel are available.

Nuclear Generation is responsible for furnishing qualified personnel, performance of and documentation of Non Destructive Examination (NDE).

The operational quality assurance program contains or references procedures for the control of special processes such as welding, heat treating, non-destructive examination, coatings, crimping, and cleaning. The program requires that approved, written procedures, qualified in accordance with applicable codes and standards, be utilized when the performance of such processes affects the proper functioning of a station's QA Condition 1 structures, systems, and components. These procedures shall provide for documented evidence of acceptable accomplishment of special processes using qualified procedures, equipment, and personnel.

Personnel performing such activities must be qualified in accordance with applicable codes and standards. Adequate documentation of personnel qualifications is required prior to performance of the applicable special process. Non-destructive examination personnel are certified to required codes and standards.

17.3.2.12 Inspection

In order to assure safe and reliable operation, a program of inspections for QA Condition 1 structures, systems, and components is established at each nuclear station. Inspection procedures for those activities affecting QA Condition 1 structures, systems and components are established by Nuclear Generation personnel.

Independent inspections, examinations, measurements, observations, or tests of materials, products or activities are conducted, where necessary, to assure quality. If inspection of processed material or products is impossible or disadvantageous, indirect control by monitoring processing methods, equipment, and personnel is provided. Both inspection and process monitoring are provided when control is inadequate without both.

Inspection procedures, instructions, and checklists contain the following information or require this information on inspection reports:

- a) Characteristics to be inspected
- b) Method of inspection
- c) Measuring and test equipment information
- d) Responsibility for the inspection
- e) Acceptance or rejection criteria
- f) Identification of required procedures, drawings, specifications, etc.
- g) Signature or initials of inspector
- h) Record of results of the inspection

The personnel performing these inspections are examined and certified in their particular category. Current qualification and certification files are maintained for each inspector. Nondestructive examination inspectors are certified in accordance with ANSI/American Society for Non-destructive

Testing (SNT-TC-1A, ANSI/SNT-CP-189) recommended practice. Written procedures require the test and certification of inspectors in other categories such as Mechanical, Electrical, and Structural as described in the appropriate quality assurance manual. For cases where inspectors will perform limited functions within a category, they are tested and certified to those limitations. These inspectors are only allowed to perform inspections specifically defined in this limited certification.

For inspections of concrete containments, personnel fulfilling the role of Responsible Engineer, shall be a Registered Professional Engineer experienced in evaluating the in-service condition of structural concrete and knowledgeable of the design and construction codes and other criteria used in the design and construction of the concrete containment structure. The Responsible Engineer may also perform inspections as discussed in this section.

Certification procedures and certifications are approved by Nuclear Generation Department personnel responsible for these processes. These procedures comply with the requirements of applicable codes and standards.

The inspection criteria for performing inspections are established from codes, specifications, and standards applicable to the activity. Examples of activities subject to inspection include:

- a) Activities specified by the ASME Code Section XI
- b) Special processes
- c) Modifications
- d) Maintenance
- e) Material Receipt

Inspection requirements for maintenance or modifications are equivalent to the original design and inspection requirements, or acceptable alternatives. Mandatory inspection hold points are included in the documents addressing the activities being performed, as necessary, and work does not proceed beyond such hold points until satisfactory completion of the required inspection, disposition of any item not meeting the acceptance criteria, and any required reinspection.

After inspection data is collected and reviewed by the inspector, the reports are technically reviewed by personnel designated to perform that quality assurance function.

Inspection activities involving the supplier quality assurance program are evaluated and approved by the Nuclear General Office, Procurement Quality section.

17.3.2.13 Corrective Action

Station personnel are responsible for the implementation of the quality assurance program as it pertains to the performance of their activities. Specific to this responsibility is the requirement for informing the responsible supervisory personnel and/or for taking appropriate corrective action whenever any deficiency in the implementation of the requirements of the program is determined.

Procedures require that conditions adverse to quality be corrected. In the case of significant conditions adverse to quality, the procedures assure that the cause of the condition is determined and action be taken to preclude repetition. Performance and verification personnel are to:

- a) Identify conditions that are adverse to quality.
- b) Suggest, recommend, or provide solutions to the problems as appropriate.
- c) Verify resolution of the issue.

17.3.2.11 Special Process Control

The Nuclear Station Manager is responsible for directing the organization and performance of the station's program for the control of special processes, and for assuring the necessary qualified personnel are available.

Nuclear Generation is responsible for furnishing qualified personnel, performance of and documentation of Non Destructive Examination (NDE).

The operational quality assurance program contains or references procedures for the control of special processes such as welding, heat treating, non-destructive examination, coatings, crimping, and cleaning. The program requires that approved, written procedures, qualified in accordance with applicable codes and standards, be utilized when the performance of such processes affects the proper functioning of a station's QA Condition 1 structures, systems, and components. These procedures shall provide for documented evidence of acceptable accomplishment of special processes using qualified procedures, equipment, and personnel.

Personnel performing such activities must be qualified in accordance with applicable codes and standards. Adequate documentation of personnel qualifications is required prior to performance of the applicable special process. Non-destructive examination personnel are certified to required codes and standards.

17.3.2.12 Inspection

In order to assure safe and reliable operation, a program of inspections for QA Condition 1 structures, systems and components is established at each nuclear station. *Insert #1* If inspection of processed material or products is impossible or disadvantageous, indirect control by monitoring processing methods, equipment, and personnel is provided. Both inspection and process monitoring are provided when control is inadequate without both. The program addresses:

- Insert #3* →
- a) Inservice inspections required by Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code.
 - b) Inspections to verify compliance with cleanliness criteria.
 - c) Inspections to verify compliance with certain instrument and maintenance procedures.
 - d) Inspections to verify conformance of materials, parts, and components received at a nuclear station with applicable specifications and requirements.
 - e) Inspections to verify the integrity of QA Condition 1 structures, systems and components during and/or after maintenance and modification.
- Reward + move as insert #2*

The personnel performing these inspections are examined and certified in their particular category. Current qualification and certification files are maintained for each inspector. Nondestructive examination inspectors are certified in accordance with ANSI/American Society for Non-destructive Testing (SNT-TC-1A, ANSI/SNT-CP-189) recommended practice. Written procedures require the test and certification of inspectors in other categories such as Mechanical, Electrical, and Structural as described in the appropriate quality assurance manual. For cases where inspectors will perform limited functions within a category, they are tested and certified to those limitations. These inspectors are only allowed to perform inspections specifically defined in this limited certification.

For inspections of concrete containments, personnel fulfilling the role of Responsible Engineer, shall be a Registered Professional Engineer experienced in evaluating the in-service condition of structural concrete and knowledgeable of the design and construction codes and other criteria used in the design

Inspection requirements for maintenance or

and construction of the concrete containment structure. The Responsible Engineer may also perform inspections as discussed in this section.

Certification procedures and certifications are approved by Nuclear Generation Department personnel responsible for these processes. These procedures comply with the requirements of applicable codes and standards.

Modifications, repairs, and replacements are inspected in accordance with the original design and inspection requirements, or acceptable alternatives. Mandatory inspection hold points are included in the documents addressing the activities being performed, as necessary, and work does not proceed beyond such hold points until satisfactory completion of the required inspection, disposition of any item not meeting the acceptance criteria, and any required reinspection. Inspection procedures, instructions, and checklists contain the following information or require this information on inspection reports:

- a) Characteristics to be inspected.
- b) Method of inspection.
- c) Measuring and test equipment information
- d) Responsibility for the inspection.
- e) Acceptance or rejection criteria.
- f) Identification of required procedures, drawings, specifications, etc.
- g) Signature or initials of inspector.
- h) Record of results of the inspection.

*Relocate as
Insert #3*

After inspection data is collected and reviewed by the inspector, the reports are technically reviewed by personnel designated to perform that quality assurance function.

Inspection activities involving the supplier quality assurance program are evaluated and approved by the Nuclear General Office, Procurement Quality section.

17.3.2.13 Corrective Action

Station personnel are responsible for the implementation of the quality assurance program as it pertains to the performance of their activities. Specific to this responsibility is the requirement for informing the responsible supervisory personnel and/or for taking appropriate corrective action whenever any deficiency in the implementation of the requirements of the program is determined.

Procedures require that conditions adverse to quality be corrected. In the case of significant conditions adverse to quality, the procedures assure that the cause of the condition is determined and action be taken to preclude repetition. Performance and verification personnel are to:

- a) Identify conditions that are adverse to quality.
- b) Suggest, recommend, or provide solutions to the problems as appropriate.
- c) Verify resolution of the issue.

Additionally, performance and verification personnel are to ensure that reworked, repaired, and replacement items are to be inspected and tested in accordance with the original inspection and test requirements or specified alternatives.

Insert #2

equivalent to

Insert # 1

Inspection procedures for those activities affecting QA Condition 1 structures, systems and components are established by Nuclear Generation personnel.

Independent inspections, examinations, measurements, observations, or tests of materials, products or activities are conducted, where necessary, to assure quality.

Insert # 2

The inspection criteria for performing inspections are established from codes, specifications, and standards applicable to the activity. Examples of activities subject to inspection include:

- a) Activities specified by the ASME Code Section XI**
- b) Special processes**
- c) Modifications**
- d) Maintenance**
- e) Material Receipt**