YANKEE ATOMIC ELECTRIC COMPANY

Telephone (413) 424-5261

49 Yankee Road, Rowe, Massachusetts 01367

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Subject: Proposed Revision to the Yankee Decommissioning Quality Assurance Program (YDQAP)

This letter submits a proposed revision (Revision 32) to the YDQAP to eliminate commitments to ANSI standards in various sections, and provides an update to the YDQAP. The current commitment to the referenced ANSI standards and Regulatory Guide (listed in the attached justification) is no longer necessary for the current condition of the Yankee Rowe site. All safety-related systems have been removed from service and have undergone or are undergoing demolition, and all spent fuel has been transferred to the Independent Spent Fuel Storage Installation (ISFSI). The only systems that remain subject to the QA Program are ISFSI related, which have been categorized as important-to-safety in accordance with Regulatory Guide 7.10 (RG 7.10), Revision 1 (6/86), Establishing Quality Assurance Programs for Packaging Used in the Transportation of Radioactive Material. The Yankee Rowe Site will continue to comply with the guidance in this Regulatory Guide.

The proposed revision to YDQAP (Revision 32) is enclosed and includes a summary of the changes. A justification for the proposed reduction of commitment is also enclosed as well as a comparison matrix of Draft Regulatory Guide 7.10 Revision 2 (DG-7004). The comparison matrix demonstrates that the provisions established in RG 7.10 have been adequately addressed in the Yankee Decommissioning Quality Assurance Program and associated implementing procedures. Additionally, each of the eighteen criteria delineated in DG-7004 were compared to the Yankee Decommissioning Quality Assurance Program and implementing procedures. All criteria were appropriately defined.

The update to the YDQAP incorporates the following additions and changes:

- New paragraph to Section IV to clarify the requirements for usage of electronic records by vendors.
- New paragraph to XVII to clarify the requirements for electronic (paperless) records.

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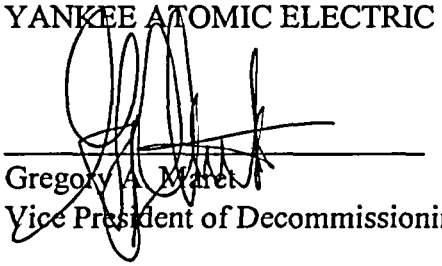
- New paragraph to clarify the requirements for storage of records on optical disks (CDs).
- Editorial changes made for clarity regarding numbering and format.

Section 1 was also updated to incorporate the current YAEC organization chart.

The proposed revision of the YDQAP is submitted for your review and approval pursuant to 10 CFR 50.54(a)(4). We trust this information is satisfactory; however, if you have any questions or desire additional information, please contact Mr. Don Calsyn, Nuclear Safety Manager @ 413 424-2265.

Sincerely,

YANKEE ATOMIC ELECTRIC COMPANY



Gregory A. Maret
Vice President of Decommissioning

cc: H. Miller, NRC Region I Administrator
J. Hickman, NRC, Senior Project Manager, NMSS
J. Wray, Inspector, NRC Region I
J. Pearson, NRC, NMSS/SFPO

YDQAP Revision 32
Reduction of Commitment Justification

Introduction

With current plant configuration such that all spent fuel is at the ISFSI, Spent Fuel Pool is drained, and Technical Specifications recently revised to eliminate all Spent Fuel Pool related requirements, Yankee Atomic Electric Company is seeking to eliminate the commitment to ANSI standards referenced in the NRC-approved Quality Assurance Program.

Description of Change

Yankee Rowe seeks to eliminate the commitment to the following ANSI standards and Regulatory Guides referenced in YDQAP.

1. ANSI N18.7-1976, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants (Endorsed by Regulatory Guide 1.33, Revision 2)
2. ANSI N45.2.2-1972, Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants (Endorsed by Regulatory Guide 1.38, Revision 2)
3. ANSI N45.2.3-1973, Housekeeping During the Construction Phase of Nuclear Power Plants (Endorsed by Regulatory Guide 1.39, Revision 2)
4. ANSI N45.2.5-1974, Supplementary Quality Assurance Requirements for Installation, Inspection and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants (Endorsed by Regulatory Guide 1.94, Revision 1)
5. ANSI N45.2.6-1978, Qualification of Inspection, Examination, and Testing Personnel for the Construction Phase of Nuclear Power Plants (Endorsed by Regulatory Guide 1.58, Revision 1)
6. ANSI N45.2.9-1974, Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants (Endorsed by Regulatory Guide 1.88, Revision 2)
7. ANSI N45.2.10-1973, Quality Assurance Terms and Definitions
8. ANSI N45.2.11-1974, Quality Assurance Requirements for the Design of Nuclear Power Plants (Endorsed by Regulatory Guide 1.64, Revision 2)
9. ANSI N45.2.12-1977, Requirements for Auditing of Quality Assurance Program for Nuclear Power Plants (Endorsed by Regulatory Guide 1.144, Revision 1)
10. ANSI N45.2.13-1976, Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants (Endorsed by Regulatory Guide 1.123, Revision 1)
11. ANSI N45.2.23-1978, Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants (Endorsed by Regulatory Guide 1.146, August 1980)
12. ANSI N18.1-1971, Selection and Training of Nuclear Power Plant Personnel (Endorsed by Regulatory Guide 1.8, Revision 1-R)
13. Regulatory Guide 1.26, Revision 3, Quality Group Classifications and Standards for Water-, Steam, and Radioactive-Waste-Containing Components of Nuclear Power Plants

YDQAP Revision 32
Reduction of Commitment Justification

Reason for Change

The reason for the change is to reduce the administrative burden invoked by the ANSI standards and better align the QA Program with a standalone ISFSI.

Alternative

The Yankee Rowe Site will continue to comply with the guidance in Regulatory Guide 7.10, Revision 1 (6/86), Establishing Quality Assurance Programs for Packaging Used in the Transportation of Radioactive Material.

Justification

The current commitment to the referenced ANSI standards and Regulatory Guide is unnecessary for the condition of the Yankee Rowe site. All fuel has been transferred from the Spent Fuel Pool to the ISFSI. The reactor and all supporting systems and components necessary for safe generation of electricity have been removed from site. All safety-related systems have been removed from service and have undergone or are undergoing demolition. The only systems that remain subject to the QA Program are ISFSI related, which have been categorized as important-to-safety in accordance with Regulatory Guide 7.10 (RG 7.10), Revision 1 (6/86).

The provisions established in RG 7.10 are adequately addressed in the Yankee Decommissioning Quality Assurance Program and associated implementing procedures. Each of the eighteen criteria delineated in DG-7004 (draft RG 7.10 Revision 2) were compared to the Yankee Decommissioning Quality Assurance Program and implementing procedures. All criteria were appropriately defined. (See the attached table.)

ANSI N18.7 states "It is recommended that the administrative controls and quality assurance provisions of this Standard be applied to other important plant equipment at a level commensurate with the importance of the equipment to reliable and efficient plant operation. However, it is emphasized that this Standard is directed primarily toward administrative controls and quality assurance associated with safety-related activities, equipment, and procedures." There are no safety related systems, structures, or components. The ISFSI is an entirely passive system. There are no complex actions needed to prevent or mitigate the consequences of an accident. There are no pumps to start, no valves to open or close, no operator actions required, and no switches to throw. The system is inherently safe by its design. The main function of the ISFSI organization is to monitor the environment in a way that demonstrates the integrity of the system. This includes such items as temperature monitoring and keeping the air vents clear. While it continues to be important to maintain an appropriate quality standard that preserves the passive functionality of the system, it can be accomplished satisfactorily through conformance to RG 7.10

Conclusion

The revised program conforms to the elements of Regulatory Guide 7.10 and remains compliant with the requirements of 10CFR71, Subpart H and 10CFR72, Subpart G. This is consistent with the operation of a standalone ISFSI. Based on the above, it is concluded that the Yankee Decommissioning Quality Assurance Program continues to satisfy the criteria of 10CFR50 Appendix B, and all other commitments previously accepted by the NRC remain intact.

Comparison of YDQAP/Draft Regulatory Guide DG-7004
(Regulatory Guide 7.10 Revision 2 Draft)

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
1. GUIDANCE ON § 71.103, QUALITY ASSURANCE ORGANIZATION **1.1 Structure and Authority** For each function, the structure of the organization and the assignment of responsibility should ensure that:		
_ The formal organization structure is documented on organization charts that identify each organizational element that functions under the QA program,	Section 1, Figure 1	An org chart is provided Section 1 of YDQAP, Figure 1.
_ The required authority and organizational freedom, including sufficient independence from influences of cost and schedule, are provided,	I.D.5	I.D.5 states the Nuclear Safety Manager is responsible to ensure that the Quality Assurance Organization has the organizational freedom and authority to: identify problems; to initiate, recommend or provide solutions through designated channels; verify implementation of solutions and stop unsatisfactory work.
_ The specified quality requirements are achieved and maintained by those who have been assigned the responsibility for performing the work,	Policy Statement	The Policy Statement says that excellence can only be attained if each individual recognizes that Quality is everyone's responsibility.
_ Measures are established to provide adequate control over activities important to safety (e.g. inspecting, cleaning, purchasing, preparing the packaging for delivery), and	Policy Statement	Controls established in YDQAP also apply to Parts 71 and 72.
_ Conformance to established requirements is verified by individuals and groups not directly responsible for performing the work.	X.C.1	X.C.1 requires that personnel performing inspection are independent of the activity being inspected.
Note: If, because of limited personnel, multiple functions including QA are performed by the same individuals, measures should be established to ensure that the designated individuals when performing QA and QC functions have the responsibility and authority to stop unsatisfactory work, stop delivery or installation of nonconforming material, and have direct access	I.D.5	I.D.5 states the Nuclear Safety Manager is responsible to ensure the QA Organization has sufficient organizational freedom and authority to: identify problems; to initiate, recommend, or provide solutions through designated channels; verify implementation of solutions and stop unsatisfactory work.

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
to management levels that can ensure that QA procedures important to safety have been accomplished.		
The duties and qualifications required for (1) the individual who has overall authority and responsibility for the QA program and (2) the other personnel performing QA and QC functions should be established and documented and should have the written endorsement of top management.	I.D.5 X.B.1 XVIII.B.1.b	Item (1) is addressed in Section I.D.5. Item (2) is addressed in Sections X.B.1.b and XVIII.B.1.b.
1.2 Top Management Endorsement of a QA Program Top management needs to maintain a continuing involvement in QA matters if the QA program is going to be effective. To ensure the commitment of top management, written policy should be established by the company or corporate president or by the chief executive officer stating that it is company or corporate policy to perform work on items important to safety in accordance with the requirements of Subpart H as described in the QA program plan and implemented in QA manuals. The policy statement should also identify the individuals who have been delegated authority for _ Implementing and revising the provisions of the described QA program and _ Regularly assessing the scope, status, implementation, and effectiveness of the QA program.	Policy Statement & Section 1	The Policy Statement and Section I address all aspects of Para. 1.2.
2. GUIDANCE ON § 71.105, QUALITY ASSURANCE PROGRAM **2.1 General Guidance on QA Programs** In its program description submittal, the QA program user must identify to the NRC how each of the regulations in Subpart H of 10 CFR Part 71 apply to its particular situation and how they will be satisfied. The information supplied to the NRC for review will vary as a function of the nature of the activities of the QA	YDQAP	YDQAP has been previously approved by the NRC and is allowed to be used per 10CFR71.101(f).

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
program user. For example, someone using a general license solely for the transportation of radioactive material in packages purchased or leased for that purpose would be expected to address regulations governing activities such as procurement, shipping, and handling; whereas someone who designs and fabricates packagings would be expected to address criteria on design and testing as well as material procurement activities. Elements common to all QA program descriptions include the quality organization and program, corrective action, QA records, and audits.		
In developing their QA programs, the proposed QA program users can refer to the NRC guidance in this regulatory guide and the additional guidance on graded QA in NUREG/CR-6407 (Ref. 2). In developing its program, the QA program user is to apply each of the applicable Subpart H regulations in a graded approach, i.e., to an extent that is consistent with its importance to safety.	YDQAP	YDQAP has been previously approved by the NRC and is allowed to be used per 10CFR71.101(f).
Following a technical review and a determination by the NRC staff that the QA program submittal meets regulatory requirements, NRC issues a QA Program Approval. The approval expires five years from the month of issuance and may be renewed, according to 10 CFR 71.38, not less than 30 days prior to expiration by the request of the QA program user.	YDQAP	YDQAP has been previously approved by the NRC and is allowed to be used per 10CFR71.101(f).
All changes to the approved QA program description require NRC approval. Therefore, if a QA program user desires to make a change in the QA program description that was used as the basis for NRC approval, the change must be submitted for review and approval by the NRC before the change can by implemented. Requests for review and approval of such changes are handled through an amendment of the QA Program Approval and do not affect the five-year renewal date.	YDQAP	YDQAP has been previously approved by the NRC and is allowed to be used per 10CFR71.101(f).

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
The only exception to the need for NRC approval of any change is with respect to an NRC-approved Appendix B to 10 CFR Part 50 QA Program that has been accepted under 10 CFR 71.101(f). This exception allows a nuclear power plant licensee to change an NRC approved Appendix B to Part 50 QA Program to the extent permitted under 10 CFR 50.54(a)(3).		
Based on approval of its QA program description submittals, a QA program user will translate the regulations discussed in its program description submittal into lower-level (working level) implementing procedures governing the conduct of QA activities that are important to safety.	II.B.1	This paragraph states that the performance of quality affecting activities shall be accomplished in accordance with suitable instructions, procedures, and drawings
If a QA program submittal has been reviewed by the NRC and a description of how the requirements will be met is either lacking or some NRC regulations are not specifically addressed, the NRC will request the submittal of additional information regarding how all the applicable Subpart H regulations will be met.	N/A	YDQAP is currently approved.
2.2 Scope of QA Program Measures should be established for identifying (1) the components, structures, and systems to be covered by the QA program and (2) the approach used for verifying that the applicable components, structures, and systems meet design objectives. Although 10 CFR Part 71 allows for the development of a "graded" QA program, this does not preclude the alternative of defining a program based on maximum controls if such a program is deemed necessary to attain the confidence needed for meeting design objectives. Measures should be established to ensure that:	YDQAP Appendix C III.C.5	YDQAP Appendix C specifies the Systems, Structures, and Components that are Important-to-Safety. II.C.5 requires employment of suitable means for verifying or checking the adequacy of a design in meeting identified design objectives.
Activities important to safety are performed with specified	II.B.1	II.B.1 states that the performance of quality affecting

Comparison of YDQAP/Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10 Revision 2 Draft)

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
equipment and under suitable environmental conditions,		activities shall be accomplished in accordance with suitable instructions, procedures, and drawings.
_ Designated QA and QC responsibilities for implementation of activities important to safety are contained in QA/QC manuals, and	II.B.1	II.B.1 states that the performance of quality affecting activities shall be accomplished in accordance with suitable instructions, procedures, and drawings
_ Indoctrination and training programs are established so that personnel performing activities important to safety are trained and qualified to perform these activities.	II.E	II.E requires indoctrination and training for the personnel involved with YDQAP activities.
Table 1 **FORMAT FOR LISTING OF IMPLEMENTING PROCEDURES* (Omitted)**	N/A	This table is an example only and need not be addressed.
2.3 Applicability of QA Program Measures covered by the QA program should be compatible with and emphasize characteristics identified in the manufacturer's QA program. The rationale used to identify items classified as important to safety and subject to the users QA program should be established.	Appendix C	Appendix C specifies those items important to safety and conforms to NUREG 6407.
2.4 Documentation The QA program should ensure that activities important to safety applicable to the design, purchase, fabrication, and testing of packaging are described by written procedures and instructions and will be in place prior to engaging in these activities.	II.B.1	II.B.1 states that the performance of quality affecting activities shall be accomplished in accordance with suitable instructions, procedures, and drawings
With respect to anticipated activities important to safety that have not yet been initiated, the implementing procedures should be identified by title and procedure number. A brief description of the content of the procedures with an estimated date for completion should be included. The following table	AP-0204	AP-0204, "Application of Management and Administrative Controls to Programs and Non-Nuclear Safety (NNS) Systems, Structures, and Components (SSCs)" provides a reference to the implementing procedures for each of the eighteen criteria of 10CFR71 Subpart H.

Comparison of YDQAP/Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10 Revision 2 Draft)

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
shows a suitable format for listing procedures to demonstrate implementation of a documented QA program. To demonstrate that a documented QA program has been fully implemented by written procedures and is contained in QA/QC manuals, a master index of QA procedures related to all activities important to safety and a matrix of the QA procedures that implement each section of Subpart H should be established and maintained to reflect the current status of the QA program. The use, management, and storage of electronic records and data should also be addressed in these written procedures.	AP-0204	AP-0204, "Application of Management and Administrative Controls to Programs and Non-Nuclear Safety (NNS) Systems, Structures, and Components (SSCs)" provides a reference to the implementing procedures for each of the eighteen criteria of 10CFR71 Subpart H.
2.5 Controlled Conditions Measures should be established to ensure that activities important to safety are accomplished using appropriate production and test equipment, suitable environmental conditions, applicable codes and standards, and proper work instructions. The assignment of responsibility for each task and method used to verify conformance to these quality requirements should be documented.	II.B.1 III.C.1 YDQAP	II.B.1 states that the performance of quality affecting activities shall be accomplished in accordance with suitable instructions, procedures, and drawings utilizing appropriate equipment under suitable environmental conditions. III.C states that procedures are developed to implement YDQAP and control activities in a graded approach that is commensurate with the importance to safety, based in part on Reg Guide 7.10. Each section of YDQAP specifies responsibilities for implementation as well any documentation requirements.
3. GUIDANCE ON § 71.107, PACKAGE DESIGN CONTROL Good relationships among those responsible for preparing design disclosures, conducting independent design analyses, coordinating interfaces, and maintaining lines of communication are essential for adequate design control. To ensure an adequate commitment to control of design activities, three principal areas need to be considered: control of the design process, control of design input, and control of design		III.B.1 assigns responsibility to the Site Manager for control of design activities which include identification of the design basis and correctly translating these requirements into specifications, drawings, procedures, and instructions; controlling design interfaces among participating organizations; and controlling design changes to ensure control measures commensurate with those applied to the

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
verification.		original design.
Since design activities are not normally performed by users of packaging, this section of Subpart H should not be applicable to users of packaging. However, it should be established by the user of the packaging that the design was accomplished under control of an NRC-approved QA program.	Appendix C Paragraph D VII.C.1	Appendix C Paragraph D specifically states that the YDQAP design control process shall not be used to change or modify the affected components which are provided under the Certificate Holder's NRC-approved Quality Assurance Program. VII.C.1 requires audits and surveillances of vendors as necessary to verify a vendor's ability to comply with the applicable criteria of 10CFR50 Appendix B, 10CFR17 Subpart H, or 10CFR72 Subpart G.
Computer-aided design (CAD) is used extensively for current design applications. Designs developed using CAD methods will be prepared and stored electronically. The control of electronic data in design applications to ensure authenticity and technical accuracy must be addressed in applicable QA procedures that address software verification/validation, management of electronic records, and quality control of electronic data. Guidance for the development of QA programs for the management of electronic data are available from the Nuclear Information and Records Management Association (NIRMA), American National Standards Institute (ANSI), and the Electric Power Research Institute (EPRI). NRC Generic Letter 88-18, "Plant Record Storage on Optical Disks" (Ref. 5), and Regulatory Information Summary 00-18, "Guidance on Managing Quality Assurance Records in Electronic Media" (Ref. 6), provides guidance on the use of optical disc document imaging systems for the retrieval of record copies of QA records.	III.C.5 III.C.9 XVII.C.3.b	III.C.5 requires use of suitable means for verifying or checking the adequacy of a design meeting identified design objectives. III.C.9 requires use of procedures to control, verify, validate, and perform error reporting for computer software. XVII.C.3.b requires the control of electronic data in design applications to ensure authenticity and technical accuracy must be addressed in applicable procedures that address software verification/validation, management of electronic records, and quality control of electronic data.
3.1 Control of Design Process Measures such as "classification of characteristics" should be	III.C.2	III.C.2 requires selection and review for suitability of

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
established to ensure that packaging designs are reviewed to emphasize critical parameters that can be controlled by inspections or tests and to identify test and inspection criteria and quality standards.		application materials, parts, equipment, and processes that are essential to the safety function of SSCs that ar classified as Safety Related or Important to Safety.
Recognized engineering practices such as prescribing drafting room standards, checking methods, review and approval requirements, issuance and distribution requirements (including revisions to them), maintaining current "as-built" configurations, and storage and control of original and master copies should be established to control the preparation of drawings and specifications.	III.C.4	III.C.4 requires use of written procedures to control design interfaces that include appropriate measures for the review, approval, release, distribution, and revision of design documents
3.2 Control of Design Input Measures should be established to ensure that appropriate codes and standards are used in the design of the packaging. In the absence of such codes and standards for formulation of the design activities, alternative approaches should be identified.	III.C.1	III.C.1 requires identification and incorporation of appropriate quality standards in design documents and controlling deviations from these standards.
Measures should be established to ensure (1) that all design parameters, e.g., criticality physics, cooling, and decontamination of an item, have been properly considered, reviewed, and approved by the responsible design organization and that the parameters are in accordance with the applicable performance codes, standards, and regulatory requirements and (2) that maintenance, repair, in-service inspection, handling, storage, and cleaning requirements are specified in design documents.	III.C.2 III.C.3	III.C.2 requires selection and review for suitability of application materials, parts, equipment, and processes that are essential to the safety function of SSCs that are classified as Safety Related or Important to Safety. III.C.3 requires suitable design controls to activities such as seismic, stress, thermal, hydraulic, radiation, and accident analyses; compatibility of materials; and accessibility for inservice inspection, maintenance and repair.
3.3 Control of Design Verification Methods to be used in verifying the adequacy of the design (e.g., qualification testing, design review, or alternative calculations, including use of computer programs) should be	III.C.5	III.C.5 requires use of suitable means for verifying or checking the adequacy of a design in meeting identified design objectives. These means shall be conducted in accordance with procedures and may include design reviews, alternate or simplified calculation methods or by a

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
established. Technically qualified individuals or groups responsible for design verification should not be in the administrative line of authority of the original designer. The designer's immediate supervisor may perform the verification provided: _ The supervisor is the only technically qualified individual, _ The need is documented and approved in advance by the supervisor's management, and _ The QA audits cover the effectiveness of the use of supervisors as design verifiers to guard against abuse of this practice.		suitable testing program. If a test program is used, then a qualification test of a prototype unit under the most adverse design conditions shall be used. The responsibilities and qualification of the verifier, the areas and features to be verified, the pertinent considerations to be verified, the acceptance criteria and the extent of documentation to be generated shall be identified in procedures.
During the sequence of design verification, changes to the final design may result; consequently, measures should be established for ensuring that drawing and specification changes are reviewed and approved by the same individuals or organizations who reviewed and approved the original documents. Changes in design that could result in conditions different from those prescribed on the CoC should be approved by NRC prior to implementation.	III.C.7 Appendix C Paragraph D	III.C.7 requires that changes to design and specifications are subject to the same design controls and approvals that were applicable to the original design unless delegated in writing to another responsible organization. Appendix C Paragraph D specifically states that the YDQAP design control process shall not be used to change or modify the affected components which are provided under the Certificate Holder's NRC-approved Quality Assurance Program.
Design verification, if other than by qualification testing of a prototype or lead production unit, should be satisfactorily completed prior to (1) release for procurement or fabrication and (2) release to other organizations for use in other design activities except when this timing cannot be met. In these cases, design verification may be deferred provided the justification for this action is documented and the unverified portion of the design output documents are appropriately identified and controlled. When a test program is used to verify the adequacy of a design, the prototype should be subjected to the most adverse design conditions.	III.C.5	III.C.5 requires use of suitable means for verifying or checking the adequacy of a design in meeting identified design objectives. These means shall be conducted in accordance with procedures and may include design reviews, alternate or simplified calculation methods or by a suitable testing program. If a test program is used, then a qualification test of a prototype unit under the most adverse design conditions shall be used. The responsibilities and qualification of the verifier, the areas and features to be verified, the pertinent considerations to be verified, the acceptance criteria and the extent of documentation to be generated shall be identified in procedures.

Comparison of YDQAP/Draft Regulatory Guide DG-7004
(Regulatory Guide 7.10 Revision 2 Draft)

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
4. GUIDANCE ON § 71.109, PROCUREMENT DOCUMENT CONTROL Measures should be established to control the preparation, reviews, concurrences, and approvals of procurement documents. **4.1 Content of Procurement Documents** Measures should be established to ensure that procurement documents include the following information as applicable:		
_ A statement of the scope of work to be performed by the prospective supplier.	Implementing Procedure AP-0211	AP-0211 requires a description of the materials or services on the requisition.
_ The design basis technical requirements (or references thereto), including the applicable regulatory requirements, material and component identification requirements, drawings, specifications, codes and standards, special process instructions, and test and inspection requirements.	IV.B.1.b IV.C.2 VIII.B.1.a IV.C.3.a VIII.B.2 IV.C.3.c	IV.B.I.b addresses design basic technical requirements. IV.C.2 addresses regulatory rqmts/codes and standards. VIII.B.1.a addresses Material and component identification rqmts. IV.C.3.a addresses drawings/specifications. VIII.B.2 addresses Special Process instructions. IV.C.3.c addresses Test & Inspection rqmts
_ Applicable Subpart H requirements that must be complied with and described in the supplier's QA program. This QA program or portions thereof should be reviewed and concurred in by qualified QA personnel from the purchaser's organization prior to initiation of activities affected by the program. Also, if sub-tier suppliers are involved, the QA provisions appropriate to those procurements should be specified. (The extent of the supplier's or sub-tier supplier's QA program will depend on the particular item or service being procured.)	IV.C.2 Implementing Procedure AP-0211	IV.C.2 requires identification of applicable requirements of 10CFR 71 Subpart H in procurement documents. VII.C.1 requires audits and commercial surveys of vendors when required to verify a vendor's ability to comply with the applicable criteria of 10CFR71 Subpart H. Implementing procedure AP-0211 specifies the right of access to vendors and sub-tier vendors/consultants
_ Permission to gain access to the supplier's or sub-tier suppliers plant facilities and records for inspection or audit purposes. Procurement documents should identify the type of verification activities required from any sub-tier suppliers for	IV.C.4 Implementing Procedure AP-0211	IV.C.4 requires ensuring that procurement documents include requirements for the right of access to the vendor's facilities and records for the purposes of audit, surveillance or inspection. Implementing procedure AP-0211 specifies

Comparison of YDQAP/Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10 Revision 2 Draft)

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
supplied materials, as well for any design, fabrication, assembly, testing, maintenance, and repair services or activities supplied.		the right of access to vendors and sub-tier vendors/consultants
_ Identification of the documentation (e.g., drawings, specifications, procedures, inspection and fabrication plans, inspection and test records, personnel and procedure qualifications, results of chemical and physical tests on material) to be prepared, maintained, and submitted to purchaser for approval.	IV.C.3	IV.C.3 specifies the listed examples as records requirements to be prepared; maintained; and/or submitted to the purchaser.
_ Requirements for reporting and approving disposition of nonconformances.	XV.C.1.d	XV.C.1.d requires review and approval prior to implementation of any vendor-identified nonconformance dispositioned as "accept-as-is" or "repair".
_ Identification of records to be retained, controlled, and maintained by the supplier and of those records delivered to the purchaser prior to installation of hardware. These records should include the pertinent documentation to be furnished with the procured materials or services (e.g., CoC, as-built drawings, photographs, sketches, use and maintenance manuals). If the pertinent documentation is in an electronic format, the software system the documentation is to be delivered in should be specified.	IV.C.3 IV.C.7	IV.C.3 specifies examples of records requirements to be prepared; maintained; and/or submitted to the purchaser. IV.C.7 requires ensuring that if the documentation is in an electronic format, the software system used is specified.
4.2 Replacement Part Procurement Measures should be established to require that procurement of replacement parts important to safety be reviewed by QA personnel to ensure that appropriate technical and QA requirements are included in purchase orders and that the purchase orders are placed with suppliers previously qualified during fabrication of the packaging. If replacement parts are purchased from suppliers not previously identified as qualified sources, the QA program user must assure himself or herself	IV.C.6	IV.C.6 addresses replacement parts including a requirement for these parts to be at least equivalent to that used for original equipment.

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that the replacement parts meet requirements at least as stringent as the original criteria. **4.3 Review and Changes to Procurement Documents** Measures should be established to ensure that review and approval of procurement documents are recorded prior to release and that changes and revisions to procurement documents are subject to at least the same review and approval as the original documents.	IV.C.1 IV.C.5	IV.C.1 requires review and approval of procurement documents prior to release. IV.C.5 requires review and approval of changes and revisions to procurement documents at least equivalent to those for the original document.
5. GUIDANCE ON § 71.111, INSTRUCTIONS, PROCEDURES, AND DRAWINGS **5.1 Quality Assurance Program Procedures** Measures should be established to ensure that:		
5.1.1 Activities important to safety are prescribed and accomplished in accordance with current documented instructions, procedures, or drawings that have been approved by appropriate levels of management.	V.B.2	V.B.2 specifically calls for use of current procedures, instructions, and drawings with approvals assured by site manager.
5.1.2 Methods for complying with each of the applicable sections of Subpart H of 10CFR Part 71 are specified in instructions, procedures, and drawings.	V.B.2	V.B.2 invokes compliance with 10CFR71 Subpart H and 10CFR72 Subpart G which satisfies all of this section.
5.1.3 All work activities are coordinated with QA personnel to ensure that appropriate inspection and hold points are incorporated into the work plans to verify that effective repairs or rework have been performed satisfactorily.	V.C.7 X.B.2.b	V.C.7 requires review of maintenance and modification documents by knowledgeable personnel to determine the need for inspection. X.B.2.b requires incorporation of mandatory hold points into QA surveillances.
5.1.4 Instructions, procedures, and drawings include quantitative (e.g., dimensions, tolerances, and operating limits) and qualitative (e.g. workmanship samples) acceptance criteria	V.B.2	V.B.2 requires these documents to include appropriate quantitative and qualitative criteria for determining that activities have been satisfactorily accomplished.

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to verify that activities important to safety have been satisfactorily accomplished.		
5.1.5 The use, management, storage, and protection of electronic records and data are addressed in written procedures. Information on the specific software applications and storage or computing hardware must also be maintained.	XVII.C.3.a	XVII.C.3.a requires that the use, management, storage, and protection of electronic records and data are addressed in written procedures. Information on the specific software applications and storage or computing hardware must also be maintained.
5.2 QA Review and Concurrence Measures should be established to ensure that the QA organization reviews and concurs in inspection plans; test, calibration, and special process procedures; and specifications and any changes thereto. Prior to fabrication of an item, manufacturing plans should be reviewed to obtain concurrence by QA of scheduled witness and hold points during fabrication.	X.B.2.b	X.B.2.b places responsibility with the QA Organization for incorporation of mandatory inspection notification/hold points for plant or vendor activities into the QA surveillances.
6. GUIDANCE ON § 71.113, DOCUMENT CONTROL **6.1 Controlled Documents** Each of the documents under the control of the QA program should be maintained to reflect current status. As a minimum, control should be exercised over the following items: _ Design documents (e.g., drawings, specifications, and computer codes), _ Procurement documents, _ QA and QC manuals, _ Operating, maintenance, and modification procedures, _ Inspection and test procedures, _ Nonconformance reports, _ Design change requests, and _ Corrective action reports.	VI.B.1	VI.B.1 requires the site manager to establish measures for identifying the controlled documents utilized for performing quality activities. Procurement documents, nonconformance reports and corrective action reports are not controlled documents at Yankee Rowe. They function as QA records rather than controlled documents.
6.2 Control of Document Generation and Issuance		

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Controls should be established to ensure that all documents and changes thereto are adequately reviewed and approved prior to their issuance. Measures (e.g., the use of a master document list) should be included to ensure that current issues of applicable documents are available at the location where the activity is being performed to preclude use of obsolete or superseded documents. All packaging affected by design changes should be checked to verify that it is in accordance with the appropriate revision. The individuals or groups responsible for reviewing, approving, and issuing documents and revisions thereto should be identified.	VI.C.1 VI.C.2 VI.C.4 VI.C.3	VI.C.1 and VI.C.2 require review and approval of all changes, and inclusion of the changes in the document prior to placing the system in operating status. VI.C.4 requires use of a master document list. VI.C.3 requires provision to allow availability of the documents at the work location. VI.C.1 requires review and approval of document changes by the same organizations or by other responsible organizations delegated by the controlling authority.
6.3 Control of Document Changes Measures should be established to ensure that changes to documents are reviewed and approved by the same organization that performed the original review and approval and that the changes are in accordance with configuration control procedures.	VI.C.1	VI.C.1 requires review and approval by the same organizations that performed the original or by other responsible organizations delegated by the controlling authority.
6.4 Control of Electronic Documents If the documents are stored electronically, controls should be established over access to the documents to ensure that the latest versions of the documents are available and that changes to the documents are properly authorized and implemented. The software and hardware systems used for storing electronic information must be reliable to avoid alteration or corruption of the information.	XVII.C.3.c	XVII.C.3.c requires that if the documents are stored electronically, controls should be established over access to the documents to ensure that the latest versions of the documents are available and that changes to the documents are properly authorized and implemented. The software and hardware systems used for storing electronic information must be reliable to avoid alteration or corruption of the information
7. GUIDANCE ON § 71.115, CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES Measures should be established in the areas identified below to ensure that materials, equipment, and services conform to procurement documents.	YDQAP	YDQAP (as delineated below) establishes the measures necessary to assure that purchased material, equipment, and services, whether purchased directly or through

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		contractors or subcontractors, conform to the requirements of the procurement documents.
7.1 Procurement Document Planning Procurement planning procedures should be established to describe each procurement step leading to contract award for items and services. Responsible organizations for each procurement step should be identified.	IV.B.1	IV.B.1 assigns the site manager the responsibility to prepare detailed procedures as to how purchase documents are prepared, reviewed, approved, issued, and controlled.
7.2 Selection of Procurement Sources Measures should be established for evaluating and selecting procurement sources, including the extent of QA and engineering involvement. Provisions that should be considered, if applicable, include: _ The supplier's capability to comply with applicable sections of Subpart H, _ Results of the survey of the supplier's facility and QA program, and _ Review of the supplier's previous records and performance.	VII.C.1	VII.C.1 requires audits and surveys to verify a vendor's ability to comply with 10CFR71 Subpart H/10CFR72 Subpart G.
7.3 Bid Evaluation and Award Measures should be established to ensure that designated individuals or organizations evaluate proposed suppliers, as applicable to the type of procurement, based on technical considerations, conformance to QA requirements, production capability, and past performance. Prior to contract award, all unacceptable conditions identified during the bid evaluation should be resolved if possible. If any unacceptable conditions cannot be resolved prior to contract award, a commitment from the supplier should be obtained indicating that resolution will be made at a mutually agreeable date during the contract period.	XVIII.B.1	XVIII.B.1 assigns responsibility to the QA Organization to follow up on findings discovered during audits.
7.4 Supplier Performance Control Measures should be established for pre- and post-award	VII.C.2	VII.C.2.a requires surveillance of vendor's to verify

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activities such as meetings and other communications to ensure that the supplier understands procurement requirements, including, if applicable, "hold" points (i.e., preestablished inspection points in the manufacturing process that require inspection approval and release by the QA organization prior to further processing) during manufacturing and testing and before shipment.	X.B.2.b	compliance with quality requirements specified in procurement documents. X.B.2.b assigns the QA Organization responsibility for incorporation of mandatory inspection notification/hold points for vendor activities.
7.5 Verification Activities The extent to which source surveillance during fabrication, assembly, maintenance, modification, repair, inspection, testing, and shipment is performed to ensure conformance with the purchase order requirements should be established. The measures should cover: _ Instructions specifying characteristics or processes to be witnessed, inspected, or verified; _ The documentation required, and _ Identification of those responsible for implementing source surveillance.	VII.C.2 VII.B.2.b VII.C.3	VII.C.2 requires audits and surveillance of vendor activities to verify the vendor complies with the quality requirements specified in the procurement documents by observation or inspection of in-process work or by indirect monitoring of processing methods, equipment, and personnel. VII.B.2.b assigns this responsibility to the QA Organization. VII.C.3 specifies the documentation required.
The extent to which inspection upon receipt of supplier-furnished hardware is performed to ensure that items are properly identified and correspond with procurement documentation should be established. When acceptance of an item is contingent on tests after installation in the package, the acceptance documentation should be mutually established with suppliers of the item prior to its use.	VIII.C.3	VII.C.3 requires verification of correct identification of materials, parts, and components prior to release for use.
Measures such as source surveillance and audits of records should be taken as appropriate to ensure that the design and fabrication of packaging were performed under the control of an NRC-approved QA program.	Appendix C, Paragraph D	Appendix C, paragraph D states that design controls for important-to-safety SSC's are provided under the applicable NRC Certificate Holders, NRC-approved Quality Assurance Program.
7.6 Controlling Nonconformances		

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Measures should be established to ensure the proper disposition of items or services that do not meet procurement requirements. These measures should include evaluation of nonconforming items categorized by the supplier, along with technical justification and recommended disposition (e.g., use as is or repair).	XV.C.1.d	XV.C.1.d requires review and approval prior to implementation of any vendor-identified nonconformance dispositioned as "accept-as-is "or "repair".
7.7 Records Measures should be established to ensure that the supplier furnishes to the purchaser the following records as a minimum:		
_ Documentation that identifies material or equipment and the specific procurement requirements (e.g., codes, standards, and specifications met by the items).	VII.C.3.a	VII.C.3.a requires vendor documentation that identifies the purchased material/services and demonstrate compliance with procurement document requirements.
_ Documentation that identifies any procurement requirements that have not been met along with a description of those nonconformances designated "use as is" or "repair."	VII.C.3.b	VII.C.3.b requires vendor documentation that identifies and deviation(s) from procurement requirements, including a description of those deviations dispositioned as "accept-as-is "or "repair".
_ Documentation that the supplied material and equipment meets the applicable procurement requirements prior to installation or use.	VII.C.3.a	Same as above
_ Appropriate documentation, as identified in the purchase order, that will accompany the NRC-approved packing during transport and be received at the destination by the user.	VII.C.4	VII.C.4 requires review and acceptance of vendor documentation by a responsible qualified individual.
Such documents should be referenced in the CoC, should relate to the use and maintenance of the packaging, and should identify necessary actions to be taken prior to delivery of the licensed material to a carrier for transport. If the pertinent documentation is in an electronic format, the software system the documentation is to be delivered in should be specified.	Implementing Procedure AP-0211 IV.C.7	Implementing Procedure AP-0211 has provisions to require a CoC that specifically references the above mentioned documentation, as well as instructions regarding the specific Preventive Maintenance required, if any, to maintain the items in storage or use. IV.C.7 requires that if the documentation is in an electronic format, the software system used is specified.
Documentation is to be retained at the facility or site of material or equipment use.	XVII.B.1.a	XVII.B.1.a assigns responsibility to the Site Manager for retention of procurement documents.

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8. GUIDANCE ON § 71.117, IDENTIFICATION AND CONTROL OF MATERIALS, PARTS, AND COMPONENTS Measures should be established to ensure that materials, parts, and components, including partially fabricated assemblies, are adequately identified to preclude the use of incorrect or defective items. The measures should provide the means for physical identification (e.g., stamping, tags, labels, or lot-follower cards) and traceability to appropriate documentation (e.g., drawings, specifications, or mill reports) throughout fabrication, installation, and use. Also, when replacement of limited-life items is specified, measures should be established to preclude use of items whose shelf life or prescribed operation time has expired.	VIII.B.1.a VIII.B.2.a VIII.B.1.c	VIII.B.1.a assigns responsibility to the Site Manager to assure that specifications, procedures, and procurement documents contain appropriate requirement for the identification and control of materials, parts, and components. VIII.B.2.a assigns responsibility to the QA Organization to review, evaluate, or verify vendor quality controls and work process to assure traceability of materials is maintained. VIII.B.1.c assigns responsibility to the Site Manager to ensure, when required, traceability of materials, parts, and components which are received, stored, installed, and used.
Measures should be established to facilitate continued processing when required inspections or tests have not been completed in order to maintain physical identity and control over affected material.	VIII.C.2	VIII.C.2 requires identification of the item in a location and with a method which does not affect not affect its fit function, or quality when required.
9. GUIDANCE ON § 71.119, CONTROL OF SPECIAL PROCESSES Special processes are not normally performed by the user of packaging. However, if packaging maintenance requires the use of special processes (e.g., welding or heat treating) or non-destructive testing, or if special processes are required to meet CoC requirements, measures should be established to ensure that the special processes are controlled in accordance with the following:		
9.1 Procedures, equipment, and personnel are qualified in accordance with applicable codes, standards, and	IX.C.1	IX.C.1 requires completion of qualification records for procedures, equipment, and personnel associated with

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specifications.		special processes in accordance with applicable codes, standards, and specifications
9.2 The operations are performed by qualified personnel and accomplished in accordance with written process or procedure sheets that direct the recording of evidence of verification.	IX.C.2	IX.C.2 requires performance of special processes in accordance with approved procedures that result in documented evidence of verification on process records or equivalent
9.3 Qualification records of procedures, equipment, and personnel are established, filed, and kept current.	IX.C.5	IX.C.5 requires maintaining and updating as necessarym qualification records for special process procedures, equipment, and personnel.
10. GUIDANCE ON § 71.121, INTERNAL INSPECTION **10.1** Measures should be established to ensure that:		
10.1.1 Inspection procedures, instructions, or checklists are available for each work operation where necessary to assure quality,	X.B.1.a	X.B.1.a assigns responsibility to the Site Manager to assure that activities requiring quality assurance meet predetermined requirements through the use of approved inspection instructions and/or checklists.
10.1.2 Documents developed include methods for identification of characteristics and activities to be inspected, acceptance and rejection criteria, and identification of the individuals or groups responsible for performing the inspection operation,	X.C.8	X.C.8 requires the identification of inspection requirements and appropriate acceptance criteria in maintenance and modification documents.
10.1.3 Objective evidence of inspection results is recorded,	X.C.2 XVII.B.1.a	X.C.2 requires the use of instruction and/or checklists when performing inspections. XVII.B.1.a states that inspections are considered QA records.
10.1.4 Hold or witness points are identified,	X.B.2.b X.B.1.d	X.B.2.b and X.B.1.d assign responsibility for incorporation of hold points as required.
10.1.5 Approval of data by the supervisor to ensure that all inspection requirements have been satisfied, and	Implementing Procedures AP-	Provisions are established in these implementing procedures that require review of inspection

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	0211, AP-0205, and AP-0222,	documentation.
10.1.6 The prerequisites to be satisfied prior to inspection are identified, including operator qualification and equipment calibration. Where sampling is used to verify acceptability of a group of items, the standard used as the basis for acceptance should be identified.	X.B.1 Implementing Procedure AP-0211	X.B.1 states the Site Manager is responsible for providing qualified personnel and necessary equipment for inspections performed to assure work met predetermined requirements. Sampling requirements are specified in Implementing Procedure AP-0211.
10.2 Inspections **10.2.1 Receiving Inspections** Measures should be established to ensure that items important to safety (i.e., the features of a structure, component, or system under control of the QA program and necessary to ensure the integrity of the packaging or its capability to prevent or mitigate the consequences that could result from release of radioactive material) received at the plant meet the requirements specified on the purchase order.	VII.C.5	VII.C.5 requires receipt inspections of vendor furnished material/services, in accordance with predetermined instructions.
The criteria for acceptance of each of these inspections and the action to be taken if noncompliance is encountered should be established. These visual inspections should include inspection of: _ Surface conditions, _ Weld and structural integrity, _ The condition of flange faces or sealing areas, gaskets, seals, gauges, rupture disks, valves, and pressure relief devices, - The condition of tie-down members (if applicable), _- Labeling and marking, and _ Leak-tightness of the packaging.	VII.C.5 XV.C.1.b Implementing Procedure AP-0211	VII.C.5 requires receipt inspections of vendor furnished material/services, in accordance with predetermined instructions. XV.C.1.b requires identification, disposition, inspection and segregation of nonconforming items, services, or activities, including associated documentation. Implementing Procedure AP-0211 requires inspection for shipping damage as well as Technical Inspection for the attributes of physical properties, dimensional check, weld preparation, workmanship, lubricants and oils, electrical insulation, pre-op check, and any other pertinent attribute.
Provisions should be established for the control of accepted items until they are placed in stock or released for use, and	VIII.C.2 XV.C.1.b	VIII.C.2 requires identification of an item in a location and with a method which does not affect its fit, form, function, or

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provisions should be established for the proper disposition of rejected items.		quality when required. XV.C.1.b requires identification, disposition, inspection and segregation of nonconforming items, services, or activities, including associated documentation.
10.2.2 In-Process Inspections Measures should be established to ensure that process specifications and their supporting documentation provide for indirect control by monitoring processing methods, equipment, and personnel if direct inspection is impractical.	X.C.5	X.C.5 requires surveillance of processing methods, equipment, and personnel when direct inspection is not possible.
10.2.3 Final Inspections Measures should be established to ensure that final inspections provide for resolution of nonconformances identified in earlier inspections, that the inspected item is identifiable and traceable to specific records and is adequately protected from physical or environmental damage, and that supervisors review inspection records to verify that all inspection requirements have been satisfied.	X.C.4 VIII.C.1 VIII.C.2	X.C.4 requires inspection of repairs and replacements in accordance with the approved design and inspection requirements or acceptable alternatives. VIII.C.1 requires traceability to appropriate documentation such as inspection documents and deviation reports and VIII.C.2 requires identification of the item in a location and with a method which does not affect its form, fit, function, or quality.
For packaging use, checklists should be established to ensure that inspections are performed to verify the following: _ Packages are properly assembled, _ Moderators and neutron absorbers are present, if applicable, _ Valves through which primary coolant flows are protected against tampering, _ Valves are set to specifications, _ All shipping papers are properly completed, _ Packages are conspicuously and durably marked as required by DOT regulations, _ Measures are established to ensure that an individual designated by the user of packages signs the shipping tags or indicators prior to authorization for shipping.	Implementing Procedure AP-8301	Implementing procedure AP-8301 requires that all radioactive material be properly prepared, packaged, marked, labeled, loaded onto a vehicle and is in proper condition for transport.

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10.2.4 Maintenance Inspections Measures should be established for an inspection program to ensure adequate maintenance of packaging. The program should identify the items to be maintained, criteria for acceptability or replacement, and the frequencies of inspection assigned to each item.	XIII.C	XIII.C requires development and implementation of documents for special handling, preservation, storage, cleaning, packaging, and shipping in accordance with predetermined work and inspection instructions.
10.2.5 Inspectors Measures should be established to ensure that inspectors are qualified in accordance with applicable codes, standards, and company training programs; that such qualifications and certifications are kept current; and that inspection personnel are independent from individuals performing the activity being inspected.	X.C.6 X.C.1	X.C.6 requires qualification of inspectors in accordance with applicable codes, standards, and company training programs; and maintenance of qualifications and certifications. X.C.1 requires personnel performing the inspection be independent of the activity being inspected.
10.2.6 Inspection Documentation Inspection records should be maintained as QA records to document performance of inspection activities.	XVII.B.1.a	XVII.B.1.a states that inspections be considered quality assurance records.
11. GUIDANCE ON § 71.123, TEST CONTROL **11.1 Requirements** Measures should be established to ensure that applicable test programs, including prototype qualification tests, production tests, proof tests, and operational tests, are accomplished in accordance with written procedures. Measures should be established to ensure that modifications, repairs, and replacements are tested in accordance with the original design and testing requirements.	XI.C.2.b XI.C.1	XI.C.2.b requires instructions for performing tests. XI.C.1 requires assurance that changes, repairs and replacements are tested in accordance with the approved design and testing requirements or acceptable alternatives.
11.2 Procedures Measures should be established for ensuring that test prerequisites identified in the appropriate design disclosures (e.g., instrument calibrations, monitoring to be performed,	XI.C.2.b XI.C.1	XI.C.2.b requires instructions for performing tests. XI.C.1 requires assurance that changes, repairs and replacements are tested in accordance with the approved design and

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mandatory hold points, suitable environmental conditions to be maintained, condition of the test equipment, methods for physical identification of test specimen, methods for documenting or recording test data, and criteria for acceptance) are properly translated into test procedures.		testing requirements or acceptable alternatives.
11.3 Acceptance Tests Measures should be established, as appropriate, to ensure that acceptance tests are conducted prior to delivering packages for transport to a carrier. The basis for acceptance criteria (e.g., CoC, maintenance and operational manuals furnished by the packaging manufacturers) should be identified. The following items should be included in typical tests: _ Structural integrity, _ Leak-tightness (on containment vessel as well as auxiliary equipment and shield tanks), _ Component performance for valves, gaskets, and fluid transport devices. _ Shielding integrity, and _ Thermal integrity.	VII.B.1.b XI.C.2.e	VII.B.1.b assigns responsibility to the Site Manager for evaluation of purchased services during and/or after completion of the service. XI.C.2.e requires test acceptance and rejection criteria.
11.4 Maintenance Tests Maintenance test programs should be established to ensure that packages remain usable and free of excessive radiation and contamination.	Implementing Procedure AP-2976	Implementing Procedure AP-2976 details the periodic inspections, surveillance testing and calibrations that ensure SSC's for the ISFSI remain able to perform their intended functions.
The test program should include measures to ensure that test results are documented, evaluated, and determined to be acceptable by qualified responsible individuals.	XI.C.2	XI.C.2 requires review and acceptance of written test documents and test results.
11.5 Results Measures should be established to ensure that test results are documented, evaluated and maintained as QA records. These	XI.C.2	XI.C.2 requires review and acceptance of written test documents and test results, including documenting test

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records should be readily available if questions arise concerning operational aspects of the packages. The acceptability of records should be determined by a qualified individual or group.		data and results.
12. GUIDANCE ON § 71.125, CONTROL OF MEASURING AND TEST EQUIPMENT **12.1 Calibration Control** Measures should be established for ensuring that measurement and test equipment (e.g., gauges, fixtures, reference standards, and devices used to measure product characteristics) are calibrated, adjusted, and maintained at prescribed intervals or prior to use. The measuring and test equipment should be labeled or tagged to indicate the planned date of its next calibration, and the calibration records should be identified and traceable and maintained as QA records. Measures should be established to ensure that in-house reference or transfer standards used in calibrating measuring and test equipment are traceable to nationally recognized standards. Calibrating standards should have known valid relationships to nationally recognized standards. If no known recognized standard exists, the basis for calibration should be documented.	XII.C.3 XII.C.1 XII.C.6 XII.C.7	XII.C.3 requires performing, documenting, and maintaining records of the calibration performed at prescribed intervals. XII.C.1 requires identifying, controlling, and calibrating measuring and test equipment with traceability to the calibration data and usage information. XII.C.6 requires documentation and maintaing the status of all items controlled under the calibration system. XII.C.7 requires maintaining traceability of reference and transfer standards to nationally recognized standards. In addition, when no known standard exists the basis for the calibration must be documented.
12.2 Out-Of-Calibration Equipment Measures should be taken to validate previous inspection and test results up to the time of previous calibration when test and measuring equipment is found to be out of calibration. If any measuring equipment is consistently out of calibration, it should be repaired or replaced.	XII.C.4	XII.C.4 requires conducting and documenting an evaluation to determine the validity of previous inspections or test results when measuring and test equipment is forun to be out of calibration.
13 GUIDANCE ON § 71.127, HANDLING, STORAGE, AND SHIPPING CONTROL **13.1 Preservation** Measures should be established to ensure that cleaning,	XIII	All of section XIII must be considered for section 13.1 of

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handling, storage, and shipping are accomplished in accordance with design requirements to preclude damage or deterioration by environmental conditions such as temperature and humidity. When necessary, provisions should be established for the use of special handling, lifting, or storage provisions (e.g. cranes, shock absorbers, or special markings) to adequately identify and preserve packaging components or assemblies. QA program users should determine that conditions identified in a CoC are adhered to when unloading packaging.		Reg Guide 7.10. XIII.A Scope states this section establishes measures to control the handling, storage, shipping, cleaning, and preservation of material and equipment to prevent damage or deterioration. XIII.B and C provide details which generally encompass the rest of 13.1.
13.2 Preparation, Release, and Delivery to Purchaser Measures should be established to ensure that a final pre-release review has been completed. This pre-release review should ensure that packaging is prepared for delivery to the purchaser in accordance with approved drawings, specifications, and government regulations; has passed all applicable inspections and tests; is properly identified by physical markings or tags; and contains operating manuals, maintenance manuals, and generic procedures relating to its use. Measures should be established to ensure that: _ Cavities within gas-cooled package containments have been adequately dried and cavities within liquid-cooled packages have been drained to allow adequate void space. _ All conditions, including specified operations, inspections, and tests, have been completed prior to delivery to a carrier. _ All NRC and DOT requirements have been satisfied prior to delivery to a carrier. _ All necessary shipping papers have been prepared as required and reviewed by qualified personnel to verify completeness and accuracy.	Implementing Procedure AP-8301	Implementing Procedure AP-8301 requires verification, prior to shipping, of compliance with specific state or federal license provisions including shipping papers, labeling and placarding. An inspection prior to loading is also required to ensure that container integrity is adequate.
14. GUIDANCE ON § 71.129, INSPECTION, TEST, AND OPERATING STATUS		

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Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
Measures should be established to ensure that the status of inspections, tests, and operating conditions, including maintenance of items is known by organizations responsible for assurance of quality. Measures should be established for controlling the application and removal of status indicators (e.g., tags, markings, stamps) and for ensuring that the bypassing of a required inspection or test or any other required operation is procedurally controlled and under the cognizance of the QA organization.	XIV	All of section XIV must be considered for section 14.1 of Reg Guide 7.10. XIV.A Scope establishes measures for indication status of items undergoing inspections and tests (tags, labels, logs, data-sheets, etc.) to prevent unintentional bypass of required inspection and tests, including operation as well. XIV.B and C provide responsible parties and require procedural controls to accomplish.
15. GUIDANCE ON § 71.131, NONCONFORMING MATERIALS, PARTS, OR COMPONENTS An acceptable program for controlling nonconforming items should include the following principal elements: _ Proper identification, _ Segregation of discrepant or nonconforming items, _ Disposition of the items of nonconformance, and _ Evaluation of the items of nonconformance.	XV.C.1a	XV.C.1.a requires identification, disposition, inspection and segregation of nonconforming items, services, or activities, including associated documentation.
16. GUIDANCE ON § 71.133, CORRECTIVE ACTION **16.1 Reporting** Measures should be established to ensure that the causes of conditions detrimental to quality (e.g., those resulting from failures, malfunctions, deficiencies, deviations, and defective material and equipment) are promptly identified and reported to appropriate levels of management. Measures should be established for obtaining corrective actions from suppliers and for ensuring that follow-up is documented to verify that corrective actions were implemented and effective. **16.2 Closeout, Retrieval, and Disposition of Records** Measures should be established to ensure that corrective actions designated by cognizant individuals have been	XVI	All of section XVI must be considered for section 16 of Reg Guide 7.10. In section XVI, measures are established to ensure causes are identified and reported to management. Those responsible for implementation are identified and appropriately address actions to prevent recurrence. Followup is addressed by periodic reviews to verify proper implementation.

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
implemented to preclude recurrence. Individuals or organizations responsible for closing out corrective actions and documenting their resolution should be identified.		
17. GUIDANCE ON § 71.135, QUALITY ASSURANCE RECORDS **17.1 General** QA records should furnish documentary evidence of the activities affecting quality and should provide sufficient information to permit identification of the record with the items or activities to which it applies. QA records should include, as a minimum: _ Design, procurement, manufacturing, and installation records, _ Supplier evaluations, _ Nonconformance reports, _ Results of inspections and tests, _ Failure analyses, _ As-built drawings and specifications _ Qualification of personnel, procedures, and equipment, _ Calibration procedures, _ Training and retraining records, _ Corrective action reports, _ Records demonstrating evidence of operational capability, _ Records verifying repair, rework, and replacement, _ Audit plans, audit reports, corrective actions and _ Records that are used as a baseline for maintenance.	XVII.B.1.a	XVII.B.1.a states that quality assurance records shall include, but not limited to; applicable plant history, operating logs, principal maintenance, design change activities, reportable occurrences, nonconformance reports, results of reviews, inspections, tests, audits, material analyzed, monitoring of work performance, qualification of personnel, drawings, specifications, procurement documents, calibration documents and reports, corrective action reports, and other applicable decommissioning and spent fuel storage records.
Records that show evidence of delivery of packages to a carrier and proof that all NRC and DOT requirements have been satisfied should also be retained with their retention times identified.	XVII.B.1.b	XVII.B.1.b states those records required by 10CFR71.135 shall be retained for three years.
Where applicable, inspection and test records should contain: _ A description of the observation,	XI.C.2.f	XI.C.2.f requires written test documents with consideration for:

Comparison of YDQAP/Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10 Revision 2 Draft)

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
_ Evidence of completion of the inspection or test operation, _ Results of inspections or tests with appropriate data, _ Conditions detrimental to quality, _ Names of inspectors, testers, or data recorders, and _ Evidence of acceptability.		• Requirements and acceptance limits contained in applicable design and procurement documents • Instructions for performing the test • Test prerequisites • Mandatory inspection hold points requiring witnessing by the owner, contractor or inspector, when applicable • Acceptance and rejection criteria • Method of documenting test data and results
17.2 Generating Records Measures should be established to ensure that methods employed for the generation and management of documents designated as QA records result in information that is retrievable, intelligible, understandable, and reliable. The records should reflect the work accomplished and be stored in a manner that avoids unnecessary delay when the record is needed. Procedures for the generation of QA records should address hard copy records as well as electronic information.	XVII.D Implementing Procedure AP-0221	XVII.D requires implementation of an established process, which provides for administration, receipt, storage, preservation, safe keeping, retrieval, and final inspection of records. Implementing Procedure AP-0221 includes both hardcopy and electronic records. XVII.C.3.d requires the use, management, storage, and protection of electronic records and data are addressed in written procedures.
17.3 Indexing and Classification Records Quality assurance records should be classified as either "lifetime" or "nonpermanent."	Implementing Procedure AP-0221	Implementing Procedure AP-0211 classifies records as "lifetime" or "nonpermanent."
Lifetime records include records pertaining to fabrication of the package and those of a particular item while it is installed in the packaging or stored for future use. These are the records that demonstrate the capability for safe operation; provide evidence of repair, rework, replacement, or modification; aid in determining the cause for an accident or malfunction of an item; or provide a baseline for in-service inspection.	Implementing Procedure AP-0221	Implementing Procedure AP-0211 details the ISFSI records requirements and retention periods. This includes records of fabrication, operating controls, maintenance and modification, inspection, and repair.
Nonpermanent records are those that show evidence that an activity has been performed but do not meet criteria for lifetime	Implementing Procedure AP-	Implementing Procedure AP-0221 specifies retention periods for a minimum of 3 years after shipment for records

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
records. Records pertaining to use of a package must be retained for a period of 3 years after the shipment.	0221	required for packaging and transportation of Radioactive Material.
17.4 Receipt, Retrieval, and Disposition of Records Measures should be established to provide a receipt control system, including identification of individuals in each organization responsible for receiving records and assessing the current status of records in their possession. Measures should be established to ensure that records maintained inhouse or at other locations are identifiable and retrievable and are not disposed of until prescribed conditions are satisfied. For electronic records, the software systems employed for imaging and storing of information must be compatible with new hardware as current technologies are implemented. A procedure should be in place to ensure that new hardware systems can reliably store and retrieve information from existing software systems prior to the installation of the new hardware systems.	Implementing Procedure AP-0604 XVII.C.3.b	Implementing Procedure AP-0604 delineates responsibilities for processing records into permanent storage including collection, storage, and retrieval requirements for in-house as well as storage facility activities. XVII.C.3.b requires that for electronic records, the software systems employed for imaging and storing of information must be compatible with new hardware as current technologies are implemented. A procedure should be in place to ensure that new hardware systems can reliably store and retrieve information from existing software systems prior to the installation of the new hardware systems
17.5 Storage, Preservation, and Safekeeping **17.5.1** Facilities used to store records should be constructed to minimize the risk from damage or destruction by severe natural conditions such as wind, flood, fire, temperature and humidity, or infestation of insects, rodents, or mold.	XVII.D	XVII.D requires that storage facilities shall prevent destruction of the records by fire, flooding, theft, and deterioration by environmental conditions, such as temperature and humidity
17.5.2 Records should be firmly attached in binders or placed in folders or envelopes for storage in steel file cabinets.	Implementing Procedure AP-0604	Implementing Procedure AP-0604 requires where practical, attachment of records to their folders, binders, or placed in envelopes.
17.5.3 Electronic records should be maintained in facilities that minimize or eliminate the potential for destruction of information due to demagnetization.	XVII.C.3.e	XVII.C.3.a requires that electronic records should be maintained in facilities that minimize or eliminate the potential for destruction of information due to demagnetization

Comparison of YDQAP/Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10 Revision 2 Draft)

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
17.5.4 Electronic records should be backed up daily to eliminate the potential for loss of information by equipment failure or human error.	XVII.C.3.f	XVII.C.3.f requires electronic records should be backed up daily to eliminate the potential for loss of information by equipment failure or human error
17.5.5 If dual storage facilities are used to ensure the integrity of records, they should be sufficiently remote from each other to preclude damage to both facilities from a single event such as a fire or flood.	XVII.D Implementing Procedure AP-0604	XVII.D requires remote locations for dual storage. Implementing Procedure AP-0604 requires the facilities be sufficiently remote to preclude damage to both facilities from a single event.
17.5.6 Measures should be taken to preserve special records (e.g., radiographs and microfilm) from excessive light, electromagnetic fields, and temperature.	Implementing Procedure AP-0604	Implementing Procedure AP-0604 requires compliance with manufacturer's recommendations for the storage of special records.
17.5.7 Measures should be taken to preclude the entry of unauthorized personnel into record storage areas.	XVII.D	XVII.D requires implementation of an established process, which provides for administration, receipt, storage, preservation, safe keeping, retrieval, and final inspection of records.
17.5.8 Electronic information storage systems should be accessible only through security measures such as passwords, and the number of personnel with authorized access should be limited. Personnel with authorized access should have identified privileges, such as read only, or read and add only.	XVII.C.3.g	XVII.C.3.g requires that electronic information storage systems should be accessible only through security measures such as passwords, and the number of personnel with authorized access should be limited. Personnel with authorized access should have identified privileges, such as read only, or read and add only.
17.5.9 Measures should be established for prompt replacement of a record that is lost or damaged.	Implementing Procedure AP-0221	Implementing Procedure AP-0221 provides guidance for generation of QA Records including original and reproduced copies.
18. GUIDANCE ON § 71.137, AUDITS		

Comparison of YDQAP/Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10 Revision 2 Draft)

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
18.1 Elements of an Audit Program A comprehensive audit program should include: _ Assurance of the authority and organizational independence of the auditors,	I.D.5	I.D.5 states the Nuclear Safety Manager is responsible to ensure that the QA Organization has sufficient organizational freedom and authority.
_ A commitment to adequate manpower, funding, and facilities to implement the audit,	I.D.3	I.D.3 states the VP of Decommissioning is responsible for maintaining an organization that is capable of ensuring the proper implementation of the YDQAP.
_ Identification of audit personnel and their qualifications,	XVIII.B.1.b	XVIII.B.1.b states the QA Organization is responsible for the training and qualification of audit and surveillance personnel.
_ Provisions for reasonable and timely access of audit personnel to facilities, documents, and qualified personnel necessary for performing audits,	IV.C.4	IV.C.4 requires that procurement documents include requirements for the right of access to the vendor's facilities and records for the purposes of audit, surveillance or inspection.
_ Use of established procedures and checklists,	Implementing Procedure OQP-2.01	Implementing Procedure OQP-2.01 requires the use of checklists or procedures for audit performance.
_ Methods for reporting audit findings to responsible management of both the audited and auditing organizations,	XVIII.C.1	XVIII.C.1 requires documentation of audit results and review of the results with management having responsibility in the area assessed.
_ Provisions for access by the audit team to levels of management that have responsibility and authority for corrective action, and	XV.C.1.b	XV.C.1.b requires identification of those individuals or groups delegated the responsibility and authority for the disposition and written approval of nonconforming items or activities.
_ Methods for verification that effective corrective action has been accomplished on a timely basis.	XVIII.B.1.f	XVIII.B.1.f states the QA Organization is responsible for following up on findings discovered during audits or

Comparison of YDQAP/Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10 Revision 2 Draft)

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
		surveillances.
A list of the activities important to safety to be audited and the frequency at which each activity is to be audited should be established and maintained to reflect current status. The frequency of audits should be based on the importance of the activity to safety; however, each activity should be audited at least once each year.	Appendix D Paragraph A.2.g	This section of YDQAP specifies the areas to be audited and the frequency for each area.
Measures should be established to ensure that audits are made of the manufacturers of packaging to determine the extent of compliance with the purchase order and to verify that the work is being controlled by a QA program approved by the NRC.	VII.C.1.a	VII.C.1.a requires audits to verify a vendor's ability to comply with the applicable criteria of 10CFR50 Appendix B, 10CFR71 Subpart H, 10CFR72 Subpart G, and other quality program baselines.
Individuals or groups that have responsibility and authority for ensuring that corrective actions resulting from findings during audits are accomplished on a timely basis should be identified. Deficient areas should be re-audited on a timely basis to verify implementation of corrective action.	XVIII.B.1.f	XVIII.B.1.f states that the QA Organization is responsible for following up on findings discovered during audits.
18.2 Scheduling of Audits Schedules for internal, external, and management audits should be established. Measures should be established to ensure that key activities of the QA program (e.g., design, fabrication) are given priority consideration. For management audits, the schedules should identify the level of management (usually from corporate office or another division) designated to assess the overall effectiveness of the implementation of the described inhouse QA program. The activities important to safety (e.g., procurement, training of personnel) to be included in the audit program should be identified.	II.D	Management audits are addressed in II.D.
Internal audits of the applicable elements of the QA program should be audited at least annually or at least once within the	YDQAP Appendix D	Internal audits are addressed in Appendix D.

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
life of the activity, whichever is shorter.		
External audits of the elements of a major supplier's or major contractor's QA programs should be audited on a triennial basis. The 3-year period should begin with performance of an audit when sufficient work is in progress to demonstrate implementation of a QA program that has the required scope for purchases placed during the 3-year period. Management audits should be conducted at least once every 12 months.	VII.C.6	External audits are addressed in section VII.C.6.
18.3 Team Selection Qualifications of auditing personnel, including the lead auditor, should be established. The responsibilities of the audit team members and the lead auditor with respect to evaluation and issuance of audit reports should be specified. It is the responsibility of the auditing organizations to establish qualifications for prospective audit personnel and the requirement for the use of technical specialists to accomplish auditing activities important to safety. The lead auditor and the team members should be selected from personnel who do not having direct responsibility in the areas being audited.	XVIII.B.1 Implementing Procedure OQP-2.01	XVIII.B.1.a states the QA Organization is responsible for training and qualification of audit personnel. Appendix requires audit issuance within 30 days. Implementing procedure OQP-2.01 requires audit teams that are sufficiently independent to adequately assess the scope of assigned audits.
Specific guidance for determining qualifications for individual auditors and lead auditors may be obtained by referring to ANSI/ASME NQA-1 (Ref. 1) for the qualification of quality assurance program audit personnel.	N/A	This appears to be information only.
18.4 Pre-audit Conference The nature and scope of the pre-audit conference between management of the organizations being audited and the team conducting the audit should be specified prior to an audit. The purpose of the conference should be to confirm the audit scope and planned dates, meet counterparts, discuss the sequence and duration of the audit, set the time for the postaudit	Implementing Procedure OQP-2.01	Implementing Procedure OQP-2.01 specifies that an entrance meeting should be conducted prior to the audit to discuss the audit scope, audit duration, and introduce the audit team.

Comparison of YDQAP/Draft Regulatory Guide DG-7004
(Regulatory Guide 7.10 Revision 2 Draft)

Draft Regulatory Guide DG-7004 (Regulatory Guide 7.10, Revision 2 Draft)	Corresponding QA Program Requirement	YDQAP Comments
conference, establish channels of communication, and prepare an agreed-upon agenda for the audit.		
18.5 Post-Audit Conference Measures should be established to conduct a post-audit conference between the audit team and the management of the audited organization to present the results and clarify misunderstandings.	Implementing Procedure OQP-2.01	Implementing Procedure OQP-2.01 specifies that upon completion of the audit an exit meeting should be conducted. The purpose of the meeting is to discuss the audit results, including any program deficiencies.
18.6 Reporting and Response Measures should be established that identify time constraints imposed for issuing audit reports and the requested date for a corrective-action response by the audited organization. The response should clearly state the corrective action taken to prevent recurrence of nonconformances. If corrective action cannot be taken immediately, the response of the audited organization should include scheduled dates for initiation and completion of the corrective action.	YDQAP Appendix D Implementing Procedure AP-0227	Appendix D requires audit issuance within 30 days. Condition Reports initiated as a result of the audit will be processed in accordance with implementing procedure AP-0227, which ensures that problems are evaluated to the depth necessary to determine the cause and that appropriate corrective actions ar taken to prevent recurrence.
18.7 Follow-Up Action The audit team leader should verify that the audited organization provides a timely response to the audit report, that the response is adequate, and that the corrective action has been accomplished within the prescribed schedule.	Implementing Procedure OQP-2.01	Implementing Procedure OQP-2.01 requires follow-up of CRs identified during audit and evaluation in accordance with AP-0227.

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ATTACHMENT A

YDQAP Summary of Changes - Revision 32

Item No.	YDQAP Section	Change Description	Reason for change
1	Paragraph I.D.3	Add administration of Licensing to the Vice President of Decommissioning duties.	Reflect changes in site organizational structure.
2	Paragraph I.D.4	Added Decommissioning Director to the title of Site Manager.	Reflect changes in site organizational structure.
3	Section I, Figure 1	Updated organizational chart.	Reflect changes in site organizational structure.
4	Paragraph II.C	Delete the sentence "The following Regulatory Guides and ANSI standards are also utilized, when applicable, to meet the requirements of the YDQAP.	The referenced Regulatory Guides and ANSI standards are no longer applicable to Yankee Rowe QA Program and unnecessary. Regulatory Guide 7.10 continues to be referenced.
5	Paragraph II.C.2 through 14	Delete references ANSI standards N18.7, N45.2.2, N45.2.5, N45.2.6, N45.2.9, N45.2.10, N45.2.11, N45.2.12, N45.2.13, N45.2.23, N18.1 and Regulatory Guide 1.26.	The referenced Regulatory Guides and ANSI standards are no longer applicable to Yankee Rowe QA Program and unnecessary.
6	Paragraph IV.C.2	Delete reference to ANSI N18.7.	ANSI N18.7 is no longer applicable to the Yankee Rowe QA Program and unnecessary.
7	Paragraph IV.C.7	Added new paragraph to clarify the requirements for usage of electronic records by vendors.	Incorporate CR 04-01
8	Paragraph V.B.2	Delete reference to ANSI N18.7.	ANSI N18.7 is no longer applicable to the Yankee Rowe QA Program and unnecessary.
9	Paragraph VII.C.1.a	Delete reference to ANSI N18.7.	ANSI N18.7 is no longer applicable to the Yankee Rowe QA Program and unnecessary.

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Item No.	YDQAP Section	Change Description	Reason for change
10	Paragraph XVII.D	Renumbered paragraph D to paragraph C. Numbered existing paragraphs for clarity	Incorporate CR 04-01
11	Paragraph XVII.C.3	Added new paragraph to clarify the requirements for electronic (paperless) records	Incorporate CR 04-01
12	Paragraph XVII.C.4	Added new paragraph to clarify the requirements for storage of records on optical disks (CDs)	Incorporate CR 04-01
13	Paragraph XVIII.B.1.a	Delete reference to ANSI N18.7.	ANSI N18.7 is no longer applicable to the Yankee Rowe QA Program and unnecessary.
14	Appendix B	Delete Appendix B in its entirety.	The entire appendix contains exception to Regulatory Guides and ANSI standards are no longer applicable to Yankee Rowe QA Program and unnecessary.

YANKEE ATOMIC ELECTRIC COMPANY

YANKEE DECOMMISSIONING QUALITY ASSURANCE PROGRAM

(YDQAP)

REVISION 32

PREPARED BY: Don L. Calsyn

D. L. Calsyn
Nuclear Safety Manager

REVIEWED BY:

F. J. Helin
Site Manager/Decommissioning Director – Yankee Nuclear Power Station

APPROVED BY:

G. A. Maret
Vice President of Decommissioning

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AMENDMENT/REVISION SHEET

Revision No.	Date	Reason
0 (Amendment 1)	12/10/76	To address questions submitted by letter from NRC (K. R. Goller) to L. H. Heider (11/1/76).
0 (Amendment 2)	1/13/77	To address questions submitted by letter from NRC (K. R. Goller) to L. H. Heider (12/28/76).
1	9/15/77	To address organizational, programmatic, and editorial changes.
2	11/01/77	To address organizational changes.
3	11/25/77	To address organizational changes at Vermont Yankee.
4	1/13/78	To address combined inspection numbers 50-29/77-20; 50-271/77-15; and 50-309/77-16 unresolved item 4.a.
5	1/30/78	To address change in exception for ANSI N45.2.3-1973.
6	10/19/78	To address exceptions to ANSI N45.2.2-1972.
6 (Amendment 1)	3/29/79	To resolve items submitted by letter from NRC (W. P. Haass) to L. H. Heider (3/6/79).
7	9/11/79	To address changes to Yankee Rowe (Appendix D) and Vermont Yankee (Appendix E) Safety Classifications.
8	4/04/80	To address organizational changes.
9	3/09/81	To address organizational changes.
10	4/03/81	To add "Packaging of Radioactive Materials" and "Fire Protection of Safety-Related Areas" to "Other Items Requiring Quality Assurance".
11	3/01/82	To resolve items submitted by letter from NRC (W. P. Haass) to W. P. Johnson (6/10/81).
12	3/11/83	To address organizational changes.
13		To address organizational and programmatic changes.
14	10/12/83	To address organizational changes.
15	2/15/84	To address programmatic changes.
16	10/31/85	To address organizational and programmatic changes.

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AMENDMENT/REVISION SHEET
(Continued)

Revision No.	Date	Reason
17	12/05/86	To address organizational and programmatic changes.
17A	8/14/87	To clarify surveillance activities and change VP-MOO responsibilities for the level of deficiencies requiring evaluation.
18	4/29/88	To address organizational and programmatic changes.
19	10/02/89	To address organizational and responsibility changes and deletion of Appendix C.
19A	6/01/90	To update organizational chart (for VY) to be consistent with Proposed Change No. 157 and to address organizational changes at Vermont Yankee.
20	12/21/90	To update organizational changes at Yankee and change QAD's responsibility from reviewing design documents to auditing those documents for inclusion of quality requirements.
21	11/15/91	To update organizational changes at Yankee and Vermont Yankee and change QAD responsibility from revising recommendations to prevent recurrences of significant condition adverse to quality to providing the option to review and/or audit recommendations.
22	4/15/92	To delete Appendix D listing and reference Yankee Safety Classification of Systems Manual.
23	9/30/92	To address organizational and responsibility changes.
24	12/15/93	To address organizational changes, and DQA/NSARC reporting clarifications for Vermont Yankee.
25	12/15/94	To address organizational changes made at the Yankee Nuclear Power Station addressing the decommissioning organization. Clarifications in the revised corrective action process at Vermont Yankee, and to address an exception to Regulatory Guide 1.64, and to clarify responsibilities between the Yankee and Vermont Yankee Plants.
26	12/21/95	To address organizational changes at the Yankee Nuclear Power Station and the Vermont Yankee Nuclear Power Station. To address exceptions to ANSI 18.7 and Regulatory Guide 1.33.
27	12/20/96	To address organizational changes.

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AMENDMENT/REVISION SHEET
(Continued)

Revision No.	Date	Reason
28	5/30/97	To update organizational changes. Changed exception to Regulatory Guide 1.26 for VY only. (This was withdrawn in BYR 98-025, dated 4/14/98.)
28	10/16/98	Resubmit Rev. 28 to update organizational changes, delineate decommissioning organization and eliminate all references to Vermont Yankee Nuclear Power Corporation.
29	8/31/99	To update the Program to include 10CFR72 and to redefine responsibilities and requirements based on the current status of the plant.
30	8/17/00	Revised Appendix C to include listing of SSCs "Important to Safety." Added Appendix D, Administrative Controls. Updated the program to include a commitment to Regulatory Guide 7.10; 10CFR71.135; 10CFR72.174 and recent organizational changes. Made editorial comments throughout.
31	6/20/03	To update the program for periodic submittal to the NRC in accordance with 50.71(e). The changes incorporated were evaluated in accordance with the requirements of 50.54(a) under YDQAP Change Requests 01-01, 02-01, 03-01 and 03-02, and determined not to be reductions in program commitment.
32	6/21/04	To delete reference to ANSI standards.

YANKEE ATOMIC ELECTRIC COMPANY

POLICY STATEMENT

DECOMMISSIONING QUALITY ASSURANCE PROGRAM

It is the policy of the organizations operating under the Yankee Decommissioning Quality Assurance Program (YDQAP) to strive for excellence in all aspects of nuclear power plant decommissioning and spent fuel storage. This goal can only be attained if each individual recognizes that Quality is everyone's responsibility. Each worker, supervisor, and manager has a role to play in achieving the goal of "doing it right the first time." Only if we recognize that Quality is of paramount importance, can we continue to provide for safe decommissioning and fuel storage.

The YDQAP applies to activities associated with systems, structures and components which have been identified as important to safety and subject to the regulatory requirements of 10CFR71 and 10CFR72. This program complies with the requirements of 10CFR50, Appendix B, and satisfies the quality assurance program requirements of 10CFR71, Subpart H; and 10CFR72, Subpart G. Appendix C defines the systems, structures and components (SSCs) under the purview of this program. Implementation of this program is achieved through the controls established in administrative procedures based on the requirements of this program and Regulatory Guide 7.10, Revision 1, dated 6/86. These controls are executed in a graded approach to an extent that is commensurate with the importance to safety.

The function of the Quality Oversight Program is to assess and communicate to management the adequacy, content, and appropriateness of the work being performed and to facilitate continuous improvements. However, supervision and management does not rely solely upon the efforts of the Quality Assurance Organization for quality oversight; they also take an active role in self-assessment of those activities under their control to identify problems. As previously noted, the ultimate responsibility for quality lies with each individual.

Under this program, The Yankee Atomic Electric Company (YAEC) Chief Executive Officer (CEO) is the final management authority responsible for assuring that the YDQAP is effectively implemented by the YAEC organization.

I. ORGANIZATION

A. SCOPE

This section of the YDQAP describes the duties and responsibilities of the personnel involved in establishing and executing the YDQAP.

B. RESPONSIBILITY

The responsibility for decommissioning and safe spent fuel storage at the Yankee Nuclear Power Station (YNPS) rests with YAEC. The lines of authority and functional responsibilities for developing, maintaining and implementing this Quality Assurance Program by the YAEC on-site and off-site organizations in support of the YNPS are set forth in the following paragraphs of this section.

C. ORGANIZATIONAL RELATIONSHIPS

The lines of authority for personnel and functional positions involved in the implementation of the YDQAP are shown in Figure 1.

D. QUALITY ASSURANCE PROGRAM RESPONSIBILITIES

1. Chief Executive Officer

The Chief Executive Officer (CEO) reports to the YAEC Board of Directors. This individual is the final management authority responsible for assuring that the YDQAP is effectively implemented by the YAEC organization.

2. President

The President reports to the CEO and has the necessary authority and assigned responsibility for developing, maintaining and implementing the YDQAP. The President has delegated these responsibilities to the Vice President.

3. **Vice President of Decommissioning**

The Vice President reports to the President. The Vice President is responsible for providing direction for developing and maintaining the YDQAP and for ensuring the effective implementation of supporting policies and programs. The Vice President is responsible for maintaining an organization that is capable of ensuring the proper implementation of the YDQAP, resolving quality concerns, and ensuring the safe storage of spent nuclear fuel. The Vice President is responsible for administration of Licensing.

4. **Site Manager/Decommissioning Director**

The Site Manager reports to the Vice President. The Site Manager is responsible for implementing the YDQAP and providing support services to the operating staff to store the spent nuclear fuel safely. The Site Manager is responsible for the safe operation of the site systems, structures, and components and for providing support activities required for safe operation, maintenance, and decommissioning of the facility. The Site Manager is also responsible for the administration of Engineering, Health and Safety, Construction, Site Services, Radiation Protection, Training, Chemistry, Independent Spent Fuel Storage Installation (ISFSI), Radioactive Waste, and the Independent Safety Review (ISR) process. Lines of authority and reporting responsibility for site staff are provided on Figure 1.

5. **Nuclear Safety Manager**

The Nuclear Safety Manager reports to the Vice President and is responsible for the Quality Assurance function. This individual is also responsible for providing oversight of the implementation and maintenance of the YDQAP and associated implementing procedures. The Nuclear Safety Manager provides reviews and evaluations for compliance with state and federal regulatory requirements applicable to the YNPS. This individual ensures that the Quality Assurance Organization has sufficient organizational freedom and authority to: identify problems; to initiate, recommend or provide solutions through designated channels; verify implementation of solutions and stop unsatisfactory work. The Quality Assurance Organization performs audits, surveillances and inspection activities to verify compliance with the YDQAP; Licensing Requirements; 10CFR50, Appendix B; 10CFR71, Subpart H; 10CFR72, Subpart G; and other regulatory requirements.

6. **Independent Review and Audit Committee (IRAC)**

The IRAC is responsible for those activities defined in Appendix D to this program. Appendix D also defines the functional reporting requirements for this committee.

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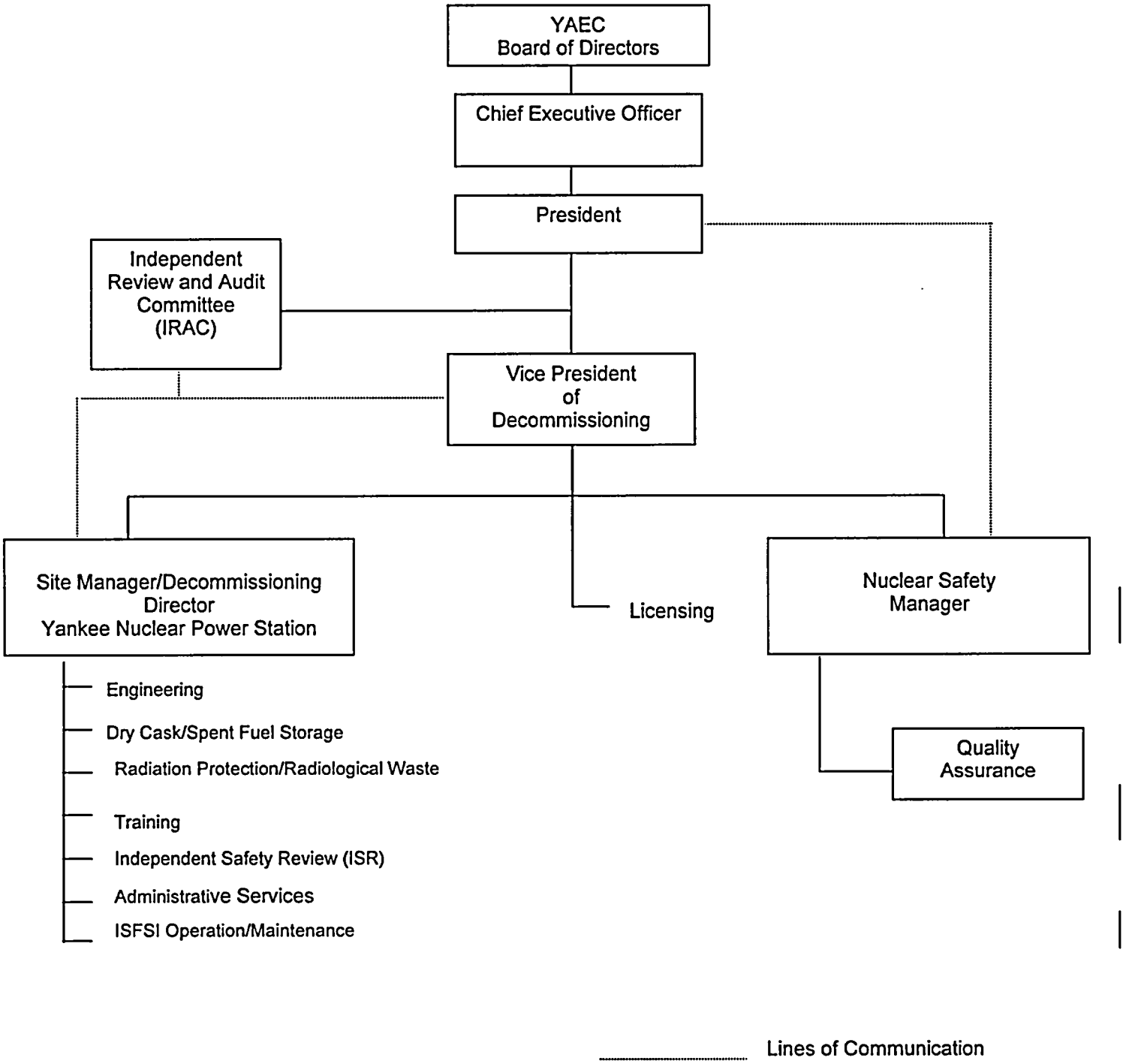
ORGANIZATION CHART



II. QUALITY ASSURANCE PROGRAM

A. SCOPE

This section of the YDQAP establishes the criteria to be applied to the systems, structures and components considered important to safety. These systems, structures and components are listed in Appendix C.

B. RESPONSIBILITIES

1. Compliance with the requirements of the YDQAP is the responsibility of personnel involved in quality effecting activities. The performance of quality affecting activities shall be accomplished in accordance with suitable instructions, procedures and drawings utilizing appropriate equipment under suitable environmental conditions.

   Note: Each section of the YDQAP identifies specific organizational responsibilities.

2. Individuals having overall responsibility for the establishment/distribution control and implementation of the YDQAP are delineated in Section I "Organization" of the Program.

3. The Quality Assurance Organization performs audits and/or surveillances and inspections of the implementation of this YDQAP criterion.

C. IMPLEMENTATION

Administrative procedures are developed to implement the YDQAP and control all activities in a graded approach to the extent necessary that is commensurate with the importance to safety. This graded approach is based in part on Regulatory Guide 7.10, Revision 1, dated 6/86 guidance. The Quality Assurance Organization shall review , by the use of audits, surveillances and inspections, administrative procedures developed to implement the YDQAP.

1. 10CFR50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants

2. Regulatory Guide 7.10, Revision 1 (6/86), Establishing Quality Assurance Programs for Packaging Used in the Transportation of Radioactive Material

Notes: 1) If conflicts are identified between the approved Technical Specifications, Appendix D, and any of the above listed documents, then the Technical Specifications take precedence.

2) Only those documents listed above are considered applicable to the YDQAP. Documents further referenced by the above listed documents shall not be considered applicable.

D. MANAGEMENT EVALUATION

The Vice President ensures the performance of periodic evaluations of the YDQAP. These reviews are performed to evaluate compliance with and the effectiveness of the YDQAP.

E. TRAINING

The Site Manager is responsible for indoctrination and training of staff personnel involved with YDQAP activities.

This indoctrination and training shall include the following:

1. Instruction as to the purpose, scope, and implementation of applicable quality-related manuals, instructions, and procedures.

2. Training and qualification in the principles and techniques of the activity being performed.

3. Documentation of the training.

4. Maintenance of personnel proficiency by periodic retraining.

III. DESIGN CONTROL

A. SCOPE

This section of the YDQAP establishes measures to assure the control over the design of, and changes to, SSCs under the purview of the YDQAP.

B. RESPONSIBILITIES

1. The Site Manager shall be responsible for ensuring the development and implementation of procedures for the control of design activities. These activities include:

   a. Identification of applicable regulatory requirements and the design basis as specified in the facility license or dry spent fuel storage or transportation system NRC CoC and supporting documents and correctly translating these requirements into specifications, drawings, procedures and instructions.

   b. Identifying and controlling design interfaces among participating design organizations.

   c. Controlling design changes, including field changes, to ensure that changes are subject to design control measures commensurate with those applied to the original design and ensuring that a change is approved by the organization that performed the original design unless this function has been delegated to another responsible organization in writing.

2. The Independent Review and Audit Committee (IRAC) shall review design activities as required by Appendix D to this YDQAP.

3. The Quality Assurance Organization will perform audits and/or surveillances of the implementation of this YDQAP section.

C. IMPLEMENTATION

Satisfaction of the requirements of this section shall be assured through the implementation of the actions listed below and in Appendix C to this YDQAP:

1. Identifying and incorporating appropriate quality standards in design documents and controlling deviations from these standards.

2. The selection and review for suitability of application materials, parts, equipment and processes that are essential to the safety function of SSCs that are classified as Safety Related or Important to Safety.

3. The application of suitable design controls to activities such as seismic, stress, thermal, hydraulic, radiation, and accident analyses; compatibility of materials; and accessibility for inservice inspection, maintenance and repair.

4. Utilizing written procedures to control design interfaces and coordination among participating design organizations. The controls shall include appropriate measures for the review, approval, release, distribution and revision of design documents.

5. Employing suitable means for verifying or checking the adequacy of a design in meeting identified design objectives. These means shall be conducted in accordance with procedures and may include design reviews, alternate or simplified calculation methods or by a suitable testing program. If a test program is used, then a qualification test of a prototype unit under the most adverse design conditions shall be used. The responsibilities and qualifications of the verifier, the areas and features to be verified, the pertinent considerations to be verified, the acceptance criteria and the extent of documentation to be generated shall be identified in procedures.

6. Assigning suitably qualified individuals or groups to the design verification or checking process. These individuals or groups maybe from the same organization but shall not have been responsible for the original design.

7. Changes to design and specifications are subject to the same design controls and approvals that were applicable to the original design unless delegated in writing to another responsible organization.

8. Identifying and documenting errors and deficiencies in the design process that adversely affect SSCs important to safety and taking appropriate corrective action to preclude repetition of the error or deficiency.

9. Utilizing procedures to control, verify, valid and perform error reporting for computer software.

IV. PROCUREMENT DOCUMENT CONTROL

A. SCOPE

This section of the YDQAP establishes the measures necessary to assure that applicable regulatory requirements, design basis and other requirements which are necessary to assure adequate quality, are suitably included or referenced in the documents for procurement of material, equipment and services.

B. RESPONSIBILITIES

1. The Site Manager shall ensure the following:

   a. The preparation of detailed procedures as to how purchase documents are prepared, reviewed, approved, issued, and controlled.

   b. The preparation of engineering specifications which detail the technical and quality requirements for material, equipment and services.

   c. The integration of appropriate quality assurance requirements into procurement requisitions

2. The Quality Assurance Organization will perform audits and/or surveillances of the implementation of this YDQAP section.

C. IMPLEMENTATION

Satisfaction of the requirements of this section shall be assured through the implementation of the actions listed below:

1. The review and approval of procurement documents will be documented prior to release. This documentation will be maintained for verification.

2. Identification of applicable quality assurance requirements of 10CFR50, Appendix B; 10CFR71, Subpart H; and 10CFR72, Subpart G, and/or other applicable codes, standards or regulatory documents referenced in procurement documents which are to be reviewed by the qualified personnel.

3. Identification in the procurement documents of applicable quality assurance records requirements to be: prepared; maintained; and/or submitted to the purchaser. These requirements are identified in Section XVII of this manual and include the following examples:

   a. Drawings, specifications, procedures

   b. Inspection and fabrication plans

   c. Inspection and test records

   d. Personnel and procedure qualifications

   e. Chemical and physical test results of material

4. Ensuring that procurement documents include requirements for the right of access to the vendor's facilities and records for the purposes of audit, surveillance or inspection.

5. Review and approval of changes and revisions to procurement documents at least equivalent to those for the original document.

6. Control of procurement documents for spare and replacement parts at least equivalent to that used for the original equipment.

7. Ensuring that if the documentation is in an electronic format, the software system used is specified.

V. INSTRUCTIONS, PROCEDURES, AND DRAWINGS

A. SCOPE

This section of the YDQAP establishes the measures for prescribing and accomplishing activities requiring quality assurance in accordance with approved instructions, procedures, and drawings.

B. RESPONSIBILITIES

1. The Site Manager is responsible for ensuring appropriate administrative procedures to control activities affecting quality are established and followed.

2. Persons preparing and approving documents are responsible for assuring that specifications, instructions, procedures, and drawings include appropriate quantitative or qualitative acceptance criteria for determining that activities have been satisfactorily accomplished; assuring that the applicable criteria of 10CFR50, Appendix B which satisfies the requirements of 10CFR71, Subpart H and 10CFR72, Subpart G are specified; and assuring that the documents are kept current. In addition, the following organizational positions have the specific responsibilities identified below:

   a. The Site Manager shall be responsible for ensuring the preparation, approval, maintenance, and implementation of all instructions, drawings, and procedures associated with plant and contracted service and activities.

   b. Independent Safety Reviewers (ISRs) shall be responsible for reviewing those instructions, procedures and drawings defined in the approved Technical Specifications and Appendix D.

3. The Quality Assurance Organization performs audits and/or surveillances of the implementation of this YDQAP section.

C. IMPLEMENTATION

Satisfaction of the requirements of this section shall be assured through the implementation of the actions listed below:

1. Establishment of provisions which clearly delineate the sequence of actions to be accomplished in the preparation, review, approval, and control of instructions, procedures, and drawings.

2. Review of quality affecting procedures, drawings and specifications and changes thereto by knowledgeable personnel.

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VI. DOCUMENT CONTROL

A. SCOPE

This section of the YDQAP establishes the measures for controlling the issuance of documents, including revisions thereto, which affect quality activities.

B. RESPONSIBILITIES

1. The Site Manager shall ensure document control measures are established which provide for the following:

   a. Identification of controlled documents utilized for performing quality activities.

   b. Identification of organizations responsible for preparation, review, approval, and control of documents used in performing the activity.

   c. Coordination and control of interface documents.

   d. Establishment of distribution lists.

   e. Action to be taken for obsolete or superseded documents.

2. The Quality Assurance Organization will perform audits and/or surveillances of the implementation of this YDQAP section.

C. IMPLEMENTATION

Satisfaction of the requirements of this section shall be assured through the implementation of the actions listed below:

1. Review and approval of document changes by the same organizations that performed the original review and approval or by other responsible organizations delegated by the controlling authority.

2. Inclusion of approved changes in instructions, drawings, and other applicable documents prior to placing the system in operating status.

3. Provision to allow availability of documents, as needed, at the location where the activity is to be performed prior to commencing the work.

4. Establishment, revision, and distribution of a master list or equivalent to identify the current revision number of instructions, specifications, drawings, procurement documents, or other quality assuring documents. (Cancelled procedures are not required for inclusion within the list.)

5. Control of documents as identified in administrative procedures.

6. Appendices to the YDQAP are considered to be part of the Program and are reviewed and approved in accordance with the Program.

VII. CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES

A. SCOPE

This section of the YDQAP establishes measures to assure that purchased material, equipment and services, whether purchased directly or through contractors and subcontractors, conforms to the requirements of the procurement documents.

B. RESPONSIBILITIES

1. The Site Manager shall ensure that provisions have been established for the:

   a. Receipt inspection and control of material and equipment.

   b. Evaluation of purchased services during and/or after completion of the service.

   c. Control of purchased material, parts and components until issued for installation or use.

2. The Quality Assurance Organization shall be responsible for:

   a. Audits and Commercial Surveys of vendor quality assurance programs.

   b. Surveillances of vendor activities.

   c. Maintenance of an approved vendors list.

   d. Audits and/or surveillance of the implementation of this YDQAP section.

C. IMPLEMENTATION

Satisfaction of the requirements of this section shall be assured through the implementation of the actions listed below:

1. Audits and Commercial Surveys of vendors based on one or more of the following, as appropriate for the scope of procurement activities:

a. When required to verify a vendor's ability to comply with the applicable criteria of 10CFR50, Appendix B, 10CFR71, Subpart H; 10CFR72, Subpart G; or other quality program baselines.

b. When required, based on the results of a review and evaluation of vendor performance history.

c. When required in order to observe vendor activities to assure conformance to purchase specifications.

2. Surveillances of vendors which provide for:

a. Verification that the vendor complies with the quality requirements specified in procurement documents by observation or inspection of in-process work or by indirect monitoring of processing methods, equipment and personnel.

3. Transfer of the following records from the vendor to the plant:

a. Documentation that identifies the purchased material/services and demonstrate compliance with procurement document requirements.

b. Documentation that identifies any deviation(s) from procurement requirements, including a description of those deviations dispositioned "accept as is" or "repair".

4. Review and acceptance of vendor documentation by a responsible qualified individual.

5. Receipt inspections of vendor furnished material/services, in accordance with predetermined instructions.

6. Evaluations of vendor effectiveness to control quality is performed at intervals consistent with the importance, complexity and quality of the item/services.

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VIII. IDENTIFICATION AND CONTROL OF MATERIAL, PARTS, AND COMPONENTS

A. SCOPE

This section of the YDQAP establishes the measures for identification and control necessary to prevent the use of incorrect or defective material, parts, and components.

B. RESPONSIBILITIES

1. The Site Manager shall be responsible for:

   a. Assuring that specifications, procedures and procurement documents contain appropriate requirements for the identification and control of materials, parts, and components.

   b. Providing review and approval of documentation for the purchase of materials, parts, and components.

   c. Ensuring that traceability of materials, parts, and components which are received, stored, installed, and used at the YNPS are maintained when required by codes, standards, and/or regulatory requirements.

2. The Quality Assurance Organization shall be responsible for:

   a. The review, evaluation, or verification (audit, commercial survey or surveillance) of vendor quality controls and work processes to assure that traceability of materials is maintained through the use of heat number, part number, or serial number, either on the item or on records traceable to the items when required by codes, standards, and/or regulatory requirements.

   b. Performing audits and/or surveillances and inspections of the implementation of this YDQAP section.

C. IMPLEMENTATION

Satisfaction of the requirements of this section shall be assured through the implementation of the applicable actions listed below:

1. Traceability of the identification of materials and parts to the appropriate documentation such as drawings, specifications, purchase orders, manufacturing and inspection documents, deviation reports, and Physical and Chemical Material Test Reports when required.

2. Identification of the item in a location and with a method which does not affect its fit, function or quality when required.

3. Documented verification of correct identification of materials, parts, and components prior to release for use.

IX. CONTROL OF SPECIAL PROCESSES

A. SCOPE

This section of the YDQAP establishes the measures necessary to assure that special processes, which include but are not limited to: cleaning, welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, and other special requirements.

B. RESPONSIBILITIES

1. The Site Manager shall be responsible for ensuring development and implementation of procedures to control activities associated with special processes. These activities include:

   a. Preparation and qualification of special process procedures in accordance with the applicable codes, standards, specifications and other special requirements.

   b. Review and approval of special process procedures including procedures provided by vendors for use on-site or when otherwise specified by procurement documents.

   c. Training, qualification, requalification and maintenance proficiency for personnel performing special processes in accordance with approved procedures.

2. The Quality Assurance Organization will perform audits and/or surveillances of the implementation of this YDQAP section.

C. IMPLEMENTATION

Satisfaction of the requirements of this section shall be assured through the implementation of the actions listed below:

1. Completion of qualification records for procedures, equipment, and personnel associated with special processes in accordance with applicable codes, standards, and specifications.

2. Performance of special processes in accordance with approved procedures that result in documented evidence of verification on process records or equivalent. (CR 02-01)

3. Performance of special processes by qualified personnel.

4. Controlling and maintaining traceability of materials used in special processes, when required by code, standard or regulatory requirements.

5. Maintaining and updating as necessary, qualification records for special process procedures, equipment, and personnel.

X. INSPECTION

A. SCOPE

This section of the YDQAP establishes measures for inspection of activities requiring quality assurance to verify conformance with approved procedures, drawings, specifications and instructions.

B. RESPONSIBILITIES

1. The Site Manager shall be responsible for:

   a. Assuring that activities requiring quality assurance meet predetermined requirements through the use of approved inspection instructions and/or checklists.

   b. Providing qualified personnel and necessary equipment for inspections performed to assure work met predetermined requirements.

   c. Performing plant inspection activities to assure that predetermined requirements have been met.

   d. Incorporating hold points into instructions or procedures where applicable.

2. The Quality Assurance Organization shall be responsible for:

   a. Surveillance of vendor inspection activities and personnel.

   b. Incorporation of mandatory inspection notification/hold points for plant or vendor activities into the QA surveillances.

   c. Writing, reviewing and approving quality control inspection checklists.

   d. Performing independent QC inspection, when necessary, to assure that predetermined quality requirements have been met.

   e. Performing reviews, surveillances and audits of inspections performed by plant or contractor personnel at the plant.

   f. Reviewing plant developed inspection procedures.

C. IMPLEMENTATION

Satisfaction of the requirements of this section shall be assured through the implementation of the actions listed below:

1. Personnel performing the inspection are independent of the activity being inspected.

2. Use of instructions and/or checklists.

3. Use of necessary drawings and specifications when performing inspections.

4. Inspection of repairs and replacements in accordance with the approved design and inspection requirements or acceptable alternatives.

5. Surveillance of processing methods, equipment, and personnel when direct inspection is not possible.

6. Qualification of inspectors in accordance with applicable codes, standards, and company training programs; and maintenance of qualifications and certifications.

7. Review of maintenance and modification documents by knowledgeable personnel to determine the need for inspection.

8. The identification of inspection requirements and appropriate acceptance criteria in maintenance and modification documents.

XI. TEST CONTROL

A. SCOPE

This section of the YDQAP establishes the measures for a test program to demonstrate that SSCs will perform satisfactorily in service.

B. RESPONSIBILITIES

1. The Site Manager shall be responsible for ensuring a testing process is developed and implemented for applicable plant changes. The testing process shall include the following:

    a. Evaluation of the results

    b. Approval of the results

    c. Qualifiying personnel involved in the testing

    d. Calibration requirements for equipment used in the testing

2. The Quality Assurance Organization will perform audits and/or surveillances of the implementation of this YDQAP section.

C. IMPLEMENTATION

Satisfaction of this criterion shall be assured through the implementation of the actions listed below:

1. Assurance that changes, repairs, and replacements are tested in accordance with the approved design and testing requirements or acceptable alternatives.

2. Review and acceptance of written test documents and test results. Consideration shall be given to the following items:

    a. Requirements and acceptance limits contained in applicable design and procurement documents

    b. Instructions for performing the test

    c. Test prerequisites

    d. Mandatory inspection hold points requiring witnessing by the owner, contractor or inspector, when applicable

    e. Acceptance and rejection criteria

    f. Method of documenting test data and results

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XII. CONTROL OF MEASURING AND TEST EQUIPMENT

A. SCOPE

This section of the YDQAP establishes the measures for the control, calibration and periodic adjustments of tools, gages, instruments, and other measuring and test devices used to verify conformance to established requirements.

B. RESPONSIBILITIES

1. The Site Manager shall be responsible for ensuring the development and implementation of procedures for control of measuring and test equipment, including identification, calibration, traceability and records.

2. The Quality Assurance Organization will perform audits and/or surveillances of the implementation of this YDQAP section.

C. IMPLEMENTATION

Satisfaction of the requirements of this section shall be assured through the implementation of the actions listed below:

1. Identifying, controlling, and calibrating measuring and test equipment with traceability to the calibration data and usage information.

2. Establishing calibration intervals based on required accuracy, purpose, degree of usage, stability characteristics, and/or other conditions that could affect the measuring and test equipment.

3. Performing, documenting and maintaining records of the calibration performed at the proscribed intervals. Calibration documentation shall include the "as-found" and "as-left" condition of the measuring and test equipment.

4. Conducting and documenting an evaluation to determine the validity of previous inspections or test results when measuring and test equipment is found to be out of calibration.

5. Use of calibration standards that have an uncertainty (error) of no more than ¼ of the tolerance of the equipment being calibrated. When this is not possible, the standards shall have an accuracy that assures the equipment being calibrated will be within required tolerance and that the basis for acceptance of the calibration is documented.

6. Documentation and maintaining the status of all items controlled under the calibration system.

7. Maintaining traceability of reference and transfer standards to nationally recognized standards. Where national standards do not exist, the standard used shall have an accuracy that assures the equipment being calibrated will be within required tolerances and that the basis for acceptance of the calibration is documented.

XIII. HANDLING, STORAGE AND SHIPPING

A. SCOPE

This section of the YDQAP establishes measures to control the handling, storage, shipping, cleaning and preservation of material and equipment to prevent damage or deterioration.

B. RESPONSIBILITIES

1. The Site Manager shall be responsible for ensuring:

   a. The development and implementation of documents for the handling, storage and shipping of materials and equipment.

   b. Suitable facilities and equipment for handling, storage, and shipping of materials are provided.

   c. Inspections and tests of special handling tools and equipment.

2. The Quality Assurance Organization will perform audits and/or surveillances of the implementation of this YDQAP section.

C. IMPLEMENTATION

Satisfaction of the requirements of this section shall be assured through the development and implementation of documents for special handling, preservation, storage, cleaning, packaging, and shipping, by qualified individuals, in accordance with predetermined work and inspection instructions.

XIV. INSPECTION, TEST AND OPERATING STATUS

A. SCOPE

This section of the YDQAP establishes the measures for indicating the status of items undergoing inspections and tests (tags, labels, logs, data sheets, etc.), to prevent the unintentional bypass of required inspections and tests. In addition, this section establishes measures for indicating the operating status of components and systems to prevent their inadvertent operation.

B. RESPONSIBILITIES

1. The Site Manager shall be responsible for ensuring the control of operating equipment or systems, including the use of qualified personnel.

2. The Quality Assurance Organization will perform audits and/or surveillances of the implementation of this YDQAP section.

C. IMPLEMENTATION

Satisfaction of the requirements of this section shall be assured through the implementation of procedural controls for inspecting, testing, and operating status of systems, structures and components, utilizing status indicators, such as tags, markings, labels and stamps.

XV. NONCONFORMING MATERIALS, PARTS, AND COMPONENTS

A. SCOPE

This section of the YDQAP establishes the measures to control materials, parts, components, or any other activities, which do not conform to requirements, in order to prevent their inadvertent use.

B. RESPONSIBILITIES

1. The Site Manager shall be responsible for:

   a. Written instructions or procedures are established for the identification, control and resolution of nonconforming conditions.

   b. Initiating nonconformance reports when conditions are found which may adversely affect the quality of plant systems, structures, components, or activities.

   c. Review and approval of nonconforming services or items which cannot be corrected by vendor action.

   d. Preparation or approval of implementing documents for repair and/or rework of nonconfirming items.

2. The Quality Assurance Organization will perform audits and/or surveillances of the implementation of this YDQAP section.

C. IMPLEMENTATION

1. Satisfaction of the requirements of this section shall be assured through the development and implementation of the actions listed below:

   a. Identification, disposition, inspection and segregation of nonconforming items, services, or activities, including associated documentation.

   b. Identification of those individuals or groups delegated the responsibility and authority for the disposition and written approval of nonconforming items or activities.

   c. Subsequent inspections and tests of reworked or repaired items which require re-inspection and retest to original or equivalent methods.

   d. Review and approval prior to implementation of any vendor identified nonconformance dispostioned as "accept-as-is" or "repair".

   e. Inclusion of nonconformance reports dispositioned "accept as is" or "repair" and associated records as part of the quality assurance records furnished by a vendor.

f. Periodic analysis of nonconformance reports to show quality trends with the results reported to management for review and assessment.

2. The identification, description, disposition, inspection and signature approval of the final disposition of nonconformances shall be documented.

XVI. CORRECTIVE ACTION

A. SCOPE

This section of the YDQAP establishes measures to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment are promptly identified and corrected.

B. RESPONSIBILITIES

1. The Site Manager shall be responsible for the development and implementation of a process for identifying, documenting, and correcting conditions adverse to quality, including the identification of causes for significant conditions adverse to quality.

2. The Quality Assurance Organization will perform audits and/or surveillances of the implementation of this YDQAP section.

C. IMPLEMENTATION

Satisfaction of the requirements of this section shall be assured through implementation of the actions listed below:

1. Documentation of conditions and significant conditions adverse to quality.

2. Initiation and documentation of corrective actions taken for conditions adverse to quality, including, the identification of the cause of significant conditions adverse to quality, and any actions taken to preclude recurrence.

3. Reporting of significant conditions adverse to quality, the cause of the conditions, and the corrective action implemented to the appropriate levels of management for review and assessment.

4. Periodic reviews to verify proper implementation of corrective actions and identification of repetitive conditions.

XVII. QUALITY ASSURANCE RECORDS

A. SCOPE

This section of the YDQAP establishes the measures for maintenance of records, which provide documentary evidence of the quality of items and the activities affecting quality. Requirements shall be established for identification, transmittal, retrievability and retention of quality assurance records including duration, location, protection and assigned responsibility.

B. RESPONSIBILITIES

1. The Site Manager shall be responsible for assuring the development and implementation of procedures for the identification, review, approval, control and retention of quality assurance records. These controls shall be applied to the following types of records:

   a. The quality assurance records shall include, but not be limited to: applicable plant history, operating logs, principal maintenance, design change activities, reportable occurrences, nonconformance reports, results of reviews, inspections, tests, audits, material analyses, monitoring of work performance, qualification of personnel, drawings, specifications, procurement documents, calibration documents and reports, corrective action reports, and other applicable decommissioning and spent fuel storage records.

   b. Those records required by 10 CFR 71.135 and 10 CFR 72.174 if not provided for above. Records subject to the provisions of 10 CFR 71.135 shall be retained for three years beyond the date of the last transportation activity subject to the controls of this Quality Assurance Program. Records subject to the provisions of 10 CFR 72.174 shall be retained until the NRC license to store spent fuel at the Yankee Nuclear Power Station is terminated.

   c. Those records required by Appendix D of this program.

2. The Quality Assurance Organization will perform of audits and/or surveillances of the implementation of this YDQAP section.

C. IMPLEMENTATION

1. Satisfaction of the requirements of this section shall be assured through the implementation of an established process, which provides for administration, receipt, storage, preservation, safe keeping, retrieval, and final inspection of records.

2. The construction location and security of record storage facilities shall prevent destruction of the records by fire, flooding, theft, and deterioration by environmental conditions such as temperature or humidity. Duplicate records shall be stored in a separate remote location when the type of document is not permanently maintained in the record storage facility.

3. Electronic records (paperless record system) may be used provided the following:

   a. The control of electronic data in design applications to ensure authenticity and technical accuracy must be addressed in applicable procedures that address software verification/validation, management of electronic records, and quality control of electronic data.

   b. For electronic records, the software systems employed for imaging and storing of information must be compatible with new hardware as current technologies are implemented. A procedure should be in place to ensure that new hardware systems can reliably store and retrieve information from existing software systems prior to the installation of the new hardware systems.

   c. If the documents are stored electronically, controls should be established over access to the documents to ensure that the latest versions of the documents are available and that changes to the documents are properly authorized and implemented. The software and hardware systems used for storing electronic information must be reliable to avoid alteration or corruption of the information.

   d. The use, management, storage, and protection of electronic records and data are addressed in written procedures. Information on the specific software applications and storage or computing hardware must also be maintained.

   e. Electronic records should be maintained in facilities that minimize or eliminate the potential for destruction of information due to demagnetization.

f. Electronic records should be backed up daily to eliminate the potential for loss of information by equipment failure or human error.

g. Electronic information storage systems should be accessible only through security measures such as passwords, and the number of personnel with authorized access should be limited. Personnel with authorized access should have identified privileges, such as read only, or read and add only.

2. NRC Generic Letter 88-18, "Plant Record Storage on Optical Disks" (Ref. 5), and Regulatory Information Summary 00-18, "Guidance on Managing Quality Assurance Records in Electronic Media" (Ref. 6), may be used for guidance on the use of optical disc document imaging systems for the retrieval of record copies of QA records.

3. Records may be stored electronically on optical disks provided the use, management, storage, and protection of electronic records and data are addressed in written procedures. Information on the specific software applications and storage or computing hardware must also be maintained.

XVIII. AUDITS

A. SCOPE

This section of the YDQAP establishes the measures for a comprehensive system of planned and documented audits and in-plant surveillances to verify compliance and assess effectiveness with all aspects of the YDQAP.

B. RESPONSIBILITIES

1. The Quality Assurance Organization shall be responsible for:

   a. Providing objective evidence for audit/surveillance activities encompassed by the 18 criteria of 10CFR50 Appendix B; 10CFR71, Subpart H; 10CFR72, Subpart G; and the YDQAP, as applicable.

   b. Training and qualification of audit and surveillance personnel.

   c. Scheduling, coordinating, and implementing the Audit/Surveillance Programs.

   d. Preparing information regarding the Audit/Surveillance Program for review by IRAC.

   e. Performing vendor audits and surveillances.

   f. Following up on findings discovered during audits or surveillances.

   g. Providing recommendations to preclude recurrence of audit/surveillance findings.

   h. Performing periodic audits of functional areas, activities, and procedures under the YDQAP.

2. The Site Manager shall be responsible for correcting findings identified during audits and surveillances.

C. IMPLEMENTATION

Satisfaction of the requirements of this section shall be assured through the implementation of the following actions:

1. Documentation of the results of audit/surveillance activities and the review of these results with management having responsibility in the area assessed.

2. Management action to correct findings identified by audit/surveillance activities.

3. Review of corrective action effectiveness during audits.

4. Evaluation of quality-related practices, procedures, instructions and the effectiveness of their implementation.

5. Performance of audits.

6. Scheduling of audits and surveillances based on the status and importance to safety of the activities being performed.

YANKEE ATOMIC ELECTRIC COMPANY

APPENDIX A

Qualification Requirements for the Nuclear Safety Manager

The Nuclear Safety Manager shall, at a minimum, meet the following qualification requirements:

A. EDUCATION:

Bachelor's degree in Science or Engineering, or the equivalent in practical experience.

B. EXPERIENCE:

1. Four years experience in the field of Quality Assurance, or

2. Equivalent number of years of nuclear plant experience in a supervisory position preferably at an operating or decommissioning nuclear power plant or a combination of the two.

   a. At least one year of this four years experience shall be nuclear power plant experience associated with the implementation of the Quality Assurance Program, and

   b. Six months of the one year experience shall be obtained within a Quality Assurance organization.

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APPENDIX B

Yankee Decommissioning Quality Assurance Program Exceptions

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APPENDIX C

Classification of Systems, Structures and Components

SAFETY RELATED

None

IMPORTANT TO SAFETY AS DEFINED BY 10 CFR 71 and 10 CFR 72

A. Storage of Spent Fuel (10CFR72)

The ISFSI Systems, Structures and Components (SSCs) that are "Important-to-Safety" and the associated quality category in accordance with 10 CFR 72 Regulatory Guide 7.10 and NUREG/CR-6407 are as follows:

SSC	Quality Category (Notes 1, 3 & 4)
Transportable Storage Canister and Fuel Basket Assembly	A
Vertical Concrete Cask	B
Transfer Cask and Adapter Plate	B
Reconfigured Fuel Assembly	A
Damaged Fuel Can	A
ISFSI Pad	B
Lifting Yoke	B

B. Transport of Spent Fuel and GTCC Waste (10 CFR 71)

The ISFSI SSCs that are "Important-to-Safety" and the associated quality category in accordance with 10 CFR 71 and NUREG/CR-6407 are as follows:

SSC	Quality Category (Notes 2 & 4)
Transportable Storage Canisters and Fuel Basket Assembly	A
Reconfigured Fuel Assembly	A
Damaged Fuel Can	A
Storage Transport Cask	A
Transportable Storage Canister and Basket Assembly for GTCC Waste Containers	A

C. Radioactive Material Transport Packages (10 CFR 71)

Radioactive Material Transport Packages subject to the provisions of 10 CFR 71, Subpart C, "General Licenses" are "Important-to-Safety" and subject to the applicable requirements of the YDQAP.

D. Applicability of Design and Licensing Controls to NRC Licensed Dry Spent Fuel Storage Casks and Radioactive Material Transport Packages

Design Controls

The YDQAP design control process shall not be used to change or modify NRC Licensed Dry Spent Fuel Storage and Transportation Components or Radioactive Material Transportation Packages used at the YNPS under the provisions of 10 CFR 71, Subpart C and 10 CFR 72, Subpart K for a NRC General Licensee. Design controls for these SSCs are provided under the applicable NRC Certificate Holders, NRC approved Quality Assurance Program.

License Controls

Changes to the storage facility, storage SSCs and supporting YNPS SSCs shall be evaluated in accordance with the requirements of 10 CFR 50.59 and/or 10 CFR 72.48 (as applicable) prior to implementation to determine if prior NRC approval or a license amendment is required.

Changes to transport SSCs, licensed under 10 CFR 71, cannot be made without prior NRC approval.

The development and processing of NRC License amendments is the responsibility of the applicable NRC Certificate Holder.

Notes:

1. See NRC Certificate of Compliance No. 1025, NAC-MPC Final Safety Analysis Report (NRC Docket No. 72-1025) and associated NAC specifications for additional detail on ISFSI SSCs subject to the requirements of 10 CFR 72.

2. See NRC Certificate of Compliance No. 9235, NAC Storage Transport Cask (STC) Safety Analysis Report (NRC Docket No. 71-9235) and associated NAC specifications for additional detail on ISFSI SSCs subject to the requirements of 10 CFR 71.

3. See YAEC EDCR No. 99-302 for the basis of Quality Categories assigned to ISFSI Facility SSCs.

4. See NUREG/CR-6407 for the definitions of Quality Categories A, B, and C.

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Appendix D
Administrative Controls

Administrative controls are the written rules, orders, instructions, procedures, policies, practices, and the designation of authorities and responsibilities by the management to obtain assurance of safety and quality of maintenance of a nuclear facility. These controls shall be adhered to.

A. REVIEW AND AUDIT

1. Independent Safety Review (ISR)

An ISR shall be a thorough review conducted by one or more qualified Independent Safety Reviewers. Persons performing these reviews shall be knowledgeable in the subject area being reviewed. Independent Safety Reviews must be completed prior to implementation of proposed activities.

a. Independent Safety Reviewers shall be individuals without direct responsibility for performance of the activities under review; these reviewers may be from the same functionally cognizant organization as the individual or group performing the original work.

b. Independent Safety Reviewers shall have at least 5 years of professional experience and either a Bachelor's Degree in Engineering or the Physical Sciences or shall have equivalent qualifications in accordance with ANSI N18.1-1971. The Site Manager (or designee) shall document the appointment of Independent Safety Reviewers.

c. The following subjects shall be independently reviewed by a qualified Independent Safety Reviewer:

- Evaluations for changes in the facility as described in the Final Safety Analysis Report (FSAR), changes in procedures as described in the FSAR, and tests or experiments not described in the FSAR to verify that such actions do not involve a change to the Technical Specifications or will not require prior NRC approval or a license amendment as defined in 10 CFR 50.59 or 10 CFR 72.48;

- Proposed changes to the programs required in Section B of this appendix to verify that such changes do not involve a change to the Technical Specifications and will not require prior NRC approval or a license amendment as defined in 10 CFR 50.59 or 10 CFR 72.48.

2. Independent Review and Audit Committee (IRAC)

The IRAC is responsible for reviewing, auditing, and advising the President of Yankee Atomic Electric Company (or a designee) on matters related to the safe storage of irradiated fuel. This review and audit function is independent of line organization responsibilities.

a. The IRAC shall include a minimum of five members. Alternates may be substituted for regular members. The licensee shall designate in writing the chairman, the members, and alternates for the IRAC. The chairman shall not have management responsibilities for, or report to, the line organizations responsible for operation or maintenance of the fuel storage facility.

b. The IRAC shall collectively have experience and knowledge in the following functional areas:

- Fuel handling and storage (including the potential for criticality),
- Chemistry and Radiochemistry,
- Engineering,
- Radiation Protection, and
- Quality Assurance.

If necessary, individuals with knowledge and experience in other functional areas may be utilized to provide advice to the IRAC.

c. The IRAC shall hold at least one meeting per quarter.

d. A quorum shall consist of three regular members or their duly appointed alternates. Those members representing the line organizations responsible for the operation and maintenance of the facility shall not constitute a majority of the quorum. At least one member of the quorum shall be the chairman or the chairman's designated alternate.

e. As a minimum, the IRAC shall perform the following functions:

- Advise the Site Manager (or designee) on all matters related to safe storage of irradiated fuel;

- Advise the management of the audited organization and the Site Manager (or designee) of audit results as they relate to safe storage of irradiated fuel;

- Recommend to the management of the audited organization, and its management, any corrective action to improve the safe storage of irradiated fuel; and

- Notify the President of Yankee Atomic Electric Company of any safety significant disagreement between the IRAC and the Site Manager within 24 hours.

f. The IRAC shall be responsible for reviewing:

- The evaluations for procedures, and changes thereto, completed under the provisions of 10 CFR 50.59 or 10 CFR 72.48 to verify that such actions do not require prior NRC approval or a license amendment as defined in 10 CFR 50.59 or 10 CFR 72.48. This review may be completed after implementation of the affected procedure;

- Changes to systems, structures or components important to the safe storage of irradiated fuel to verify that such changes do not require prior NRC approval or a license amendment as defined in 10 CFR 50.59 or 10 CFR 72.48. This review may be completed after implementation of the change;

- Tests or experiments involving the safe storage of irradiated fuel to verify that such tests or experiments do not require prior NRC approval or a license amendment as defined in 10 CFR 50.59 or 10 CFR 72.48. This review may be completed after performance of the test or experiment;

- Proposed changes to the YNPS Technical Specifications or the license;

- Violations of codes, regulations, orders, license requirements, or internal procedures/instructions having nuclear safety significance;

- Indications of unanticipated deficiencies in any aspect of design or operation of systems, structures or components that could affect safe storage of irradiated fuel;

- Significant accidental, unplanned, or uncontrolled radioactive releases, including corrective action(s) to prevent recurrence;

- Significant operating abnormalities or deviations from normal and expected performance of equipment that affect safe storage of irradiated fuel;

- The performance of the corrective action system; and

- Internal and external experience information related to the safe storage of irradiated fuel that may indicate areas for improving facility safety.

Reports or records of these reviews shall be forwarded to the Site Manager within 30 days after completion of the review.

g. The IRAC's audit responsibilities shall encompass:

- Conformance of irradiated fuel storage to provisions contained within the YNPS Technical Specifications and applicable license conditions at least once per 12 months;
- The training and qualifications of facility staff at least once per 12 months;
- Implementation of all programs required by Section B of this appendix at least once per 24 months;
- Actions taken to correct deficiencies occurring in systems, structures components, or methods of operation that affect safe storage of irradiated fuel at least once per 6 months;
- Facility operations, modifications, maintenance, and surveillance related to the safe storage of irradiated fuel to verify independently that these activities are performed safely and correctly at least once per 24 months; and
- Other activities and documents as requested by the Site Manager (or designee).

Reports of records of these audits, including any recommendations for improving the safe storage of irradiated fuel, shall be forwarded to the Site Manager (or designee) within 30 days after completion of the audit.

3. Records

Written records of reviews and audits shall be maintained. As a minimum, these records shall include:

a. Results of the activities conducted under the provisions of Sections A.1 and A.2 of this appendix;

b. Recommendations to the management of the audited organization;

c. An assessment of the safety significance of review or audit findings;

d. Documentation of reviews conducted under Section A.1.c of this appendix; and

e. Determination of whether each item considered under Section A.2.f of this appendix (first three items) requires prior NRC approval or a license amendment as defined in 10CFR50.59 or 10 CFR 72.48.

B. PROCEDURES AND PROGRAMS

1. Written procedures, related to the safe storage of Spent Nuclear Fuel and GTCC Waste, shall be established, implemented, and maintained that meet or exceed the requirements and recommendations of Sections 5.2 through 5.2.9 and 5.3 of ANSI N18.7-1972 and Appendix "A" of Regulatory Guide 1.33, Revision 2, except as provided in B.2 below. The written procedures shall also cover the activities relating to:

   a. FIRE PROTECTION PROGRAM implementation.
   b. PROCESS CONTROL PROGRAM implementation.
   c. OFF-SITE DOSE CALCULATION MANUAL implementation.
   d. QUALITY ASSURANCE PROGRAM FOR EFFLUENT AND ENVIRONMENTAL MONITORING, using the guidance in Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975.

2. Each procedure and administrative policy of B.1above and changes thereto, shall be reviewed by an Independent Safety Reviewer and approved by the Site Manager (or designee) prior to implementation and reviewed periodically as set forth in administrative procedures.

3. Temporary changes to procedures required by B.1 and B.2 above may be made provided that:

   a. The intent of the original procedure is not altered.

   b. Two members of the plant management staff approve the change, of which at least one is a qualified Independent Safety Reviewer.

   c. The change is documented and approved by the Site Manager (or designee) within 14 days of implementation.

4. RADIATION PROTECTION PROGRAM PROCEDURES

   Procedures for personnel radiation protection shall be prepared consistent with requirements of 10 CFR 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposures.

5. The following programs shall be established, implemented, and maintained:

   a. RADIOACTIVE EFFLUENT CONTROLS PROGRAM

A program shall be provided conforming with 10 CFR 50.36(a) for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation, including surveillance tests and setpoint determination in accordance with the methodology in the ODCM;

- Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 CFR 20, Appendix B, Table II, Column 2;

- Monitoring, sampling, and analysis of radioactive liquid, and gaseous effluents in accordance with 10 CFR 20.106 and with the methodology and parameters in the ODCM;

- Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR 50;

- Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days;

- Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2% of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR 50.

- Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the SITE BOUNDARY conforming to the doses associated with 10 CFR 20, Appendix B, Table II, Column 1;

- Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR 50;

- Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than eight days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR 50;

- Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR 190.

b. RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the Effluent Monitoring Program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM; (2) conform to the guidance of Appendix I to 10 CFR 50; and (3) include the following:

- Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM,

- A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and

- Participation in an Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the Quality Assurance Program for environmental monitoring.

c. PROCESS CONTROL PROGRAM (PCP)

Changes to the PCP shall:

1. Be documented and records of reviews performed shall be retained as specified by Section C of this appendix. This documentation shall contain:

   - Sufficient information to support the change together with the appropriate analyses or evaluation justifying the change(s), and

   - A determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of federal, state, or other applicable regulations.

2. Shall become effective after review and acceptance by an Independent Safety Reviewer and the approval of the Site Manager (or a designee).

d. OFF-SITE DOSE CALCULATION MANUAL (ODCM)

Changes to the ODCM shall:

1. Be documented and records of reviews performed shall be retained as specified by Section C of this appendix. This documentation shall contain:

   - Sufficient information to support the change together with the appropriate analyses or evaluation justifying the change(s), and

   - A determination that the change will maintain the level of the radioactive effluent control required by 10 CFR 20.106, 40 CFR 190, 10 CFR 50.36(a), and Appendix I to 10 CFR 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.

2. Shall become effective after review and acceptance by an Independent Safety Reviewer and the approval of the Site Manager (or a designee).

3. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

C. RECORD RETENTION

1. The following records shall be retained for at least 5 years:

   a. Records and logs of facility operation covering time interval at each power level.

   b. Records and logs of principal maintenance activities, inspection, repair and replacement of principal items of equipment related to nuclear safety.

   c. All REPORTABLE EVENT reports submitted to the Commission.

   d. Records of surveillance activities, inspections and calibrations required by this appendix and the Technical Specifications.

   e. Records of reactor tests and experiments.

   f. Records of changes made to Operating Procedures.

   g. Records of radioactive shipments.

h. Records of sealed source leak tests and results.

i. Records of annual physical inventory of all sealed source material of record.

2. The following records shall be retained for the duration of the Possession Only License:

a. Records and drawing changes reflecting facility design modifications made to systems and equipment described in the FSAR.

b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.

c. Records of facility radiation and contamination surveys.

d. Records of radiation exposure for all individuals entering radiation control areas.

e. Records of gaseous and liquid radioactive material released to the environs.

f. Records of transient or operational cycles for the Reactor Pressure Vessel.

g. Records of training and qualification for current members of the plant staff.

h. Records of inservice inspections performed pursuant to Technical Specifications.

i. Records of Quality Assurance activities required by the YDQAP.

j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59 or 10 CFR 72.48.

k. Records of Independent Safety Reviews and the IRAC meetings, and records of the Plant Operational Review Committee (PORC) and the Nuclear Safety Audit and Review Committee (NSARC), the review and audit functions which preceded the Independent Safety Review function and IRAC.

l. Records for Environmental Qualification.

m. Records of analysis required by the Radiological Environmental Monitoring Program.

n. Records of the service lives of all snubbers, including the date at which the service life commences and associated installation and maintenance records.

o. Records of reviews performed for changes made to the OFF-SITE DOSE CALCULATION MANUAL and the PROCESS CONTROL PROGRAM.

D. FACILITY STAFF QUALIFICATIONS

Each member of the facility management/supervisory staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, except for the Radiation Protection Manager who shall also meet the minimum qualifications of Regulatory Guide 1.8, Revision 1.

E. REPORTABLE EVENT ACTION

The following actions shall be taken for REPORTABLE EVENTS:

1. The Commission shall be notified and a report submitted pursuant to the requirements of 10 CFR 50.73, and

2. An Independent Safety Reviewer shall review each REPORTABLE EVENT and the results of this review shall be submitted to the Independent Review and Audit Committee (IRAC) and the Site Manager.

F. REPORTING REQUIREMENTS

The following identified reports shall be submitted pursuant to 10 CFR 50.4. The reporting requirements of the following three sections are in accordance with Revision 4 of Regulatory Guide 1.16, "Reporting of Operating Information – Appendix A Technical Specifications."

1. Annual Report

   Annual reports covering the activities of the unit as described below for the previous year shall be submitted prior to March 1 of each year. Reports required on an annual basis shall include:

   a. A tabulation on an annual basis of the number of station, utility and other personnel (including contractors) receiving exposures greater than 100 mrem/yr and their associated man rem exposure according to work and job functions, (a) e.g., operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), and waste processing.

      The dose assignment to various duty functions may be estimates based on pocket dosimeter, TLD, or film badge measurements. Small exposures totaling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the whole body dose received from external sources shall be assigned to specific major work functions.

   b. Any other unit-unique reports required on an annual basis.

2. Unique Reporting Requirements

   a. Environmental Radiological Monitoring:

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted before May 1 of each year. The report shall include summaries, interpretations, and analysis of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in 1) the ODCM, and 2) Sections IV.B.2, IV.B.3, and IV.C of Appendix I to 10 CFR 50.

b. Annual Radioactive Effluent Release Report

The Annual Radioactive Effluent Release Report covering the operation of the unit during the previous calendar year shall be submitted before May 1 of each year. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be (1) consistent with the objectives outlined in the ODCM and PCP, and (2) in conformance with 10 CFR 50.36(a) and Section IV.B.1 of Appendix I to 10 CFR 50.

3. Special Reports

Special reports shall be submitted pursuant to 10 CFR 50.4 within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification:

- Sealed Source leakage in excess of 10 CFR 70.39(c) limits.

G. HIGH RADIATION AREA

Paragraph 20.203, "Caution Signs, Labels, Signals, and Controls." In lieu of the "control device" or "alarm signal" required by Paragraph 20.203(c)(2), each high radiation area in which the intensity of radiation is 1000 mrem/hr or less shall be barricaded and conspicuously posted as a high radiation area, and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP). *

An individual or group of individuals permitted to enter such areas shall be provided with one or more of the following:

1. A radiation monitoring device which continuously indicates the radiation dose rate in the area.

2. A radiation monitoring device which continuously integrates the radiation dose rate in the area, and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.

3. A Radiation Protection qualified individual (i.e., qualified in radiation protection procedures), with a radiation dose rate monitoring device, who is responsible for providing positive control over the activities within the area and who will perform radiation surveillance at the frequency specified in the RWP. The Radiation Protection Manager will establish the surveillance frequency.

The above procedure shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr. In addition, locked doors shall be provided to prevent

unauthorized entry into such areas and the key shall be maintained under the administrative control of the Shift Supervisor on duty and/or the Radiation Protection Manager.

* Radiation Protection personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, providing they are following plant radiation protection procedures for entry into high radiation areas.

H. LIQUID HOLD-UP TANKS – LIMITING CONDITION FOR OPERATION

The quantity of radioactive material contained in any outside tank that is not surrounded by liners, dikes or walls capable of holding tank contents, or that does not have a tank overflow connected to the liquid radwaste treatment system, shall be limited to less than or equal to 10 curies, excluding tritium and dissolved or entrained noble gases.

1. APPLICABILITY:

AT ALL TIMES

2. ACTION:

With the quantity of radioactive material in any outside tank exceeding the above limit, without delay, take action to suspend all additions of radioactive material to the tank. Within 48 hours reduce the tank contents to within the limit and describe the events leading to this condition in the next Annual Radioactive Effluent Release Report.

3. SURVEILLANCE REQUIREMENTS:

The quantity of radioactive material contained in any outside tank that is not surrounded by liners, dikes, or walls capable of holding the tank contents shall be determined to be within the above limit by analyzing a representative sample of the tank's contents at least once per 7 days when radioactive materials are being added to the tank.

I. SEALED SOURCE CONTAMINATION – LIMITING CONDITION FOR OPERATION

Each sealed source containing radioactive material either in excess of 100 microcuries of beta and/or gamma emitting material or 5 microcuries of alpha emitting material shall be free of $\geq$0.005 microcuries of removable contamination.

1. APPLICABILITY:

AT ALL TIMES

2. ACTION:

Each sealed source with removable contamination in excess of the above limits shall be immediately withdrawn from use and either:

a. Decontaminated and repaired, or

b. Disposed of in accordance with Commission Regulations.

3. SURVEILLANCE REQUIREMENTS:

a. Test Requirements:

Each of the above required sealed sources shall be tested for leakage and/or contamination by:

1. The licensee, or

2. Other persons specifically authorized by Commission or an Agreement State.

The test method shall have a detection sensitivity of at least 0.005 microcuries per test sample.

b. Test Frequencies:

Each category of the above required sealed sources shall be tested at the frequency described below.

1. Sources in use (excluding startup sources and fission detectors previously subjected to core flux) – At least once per 6 months for all sealed sources containing radioactive materials:

   - With a half-life greater than 30 days (excluding Hydrogen 3), and

   - In any form other than gas.

2. Stored sources not in use – Each sealed source shall be tested prior to use or transfer to another licensee unless tested within the previous 6 months. Sealed sources transferred without a certificate indicating the last test date shall be tested prior to being placed into use.

c. Reports:

A Special Report shall be prepared and submitted to the Commission pursuant to 10 CFR 50.4 annually if sealed source leakage tests reveal the presence of greater than 0.005 microcuries of removable contamination.