YANKEE ATOMIC ELECTRIC COMPANY

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June 30, 2003
BYR 2003-057

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

References: (a) Letter, J. A. Kay (YAEC) to USNRC, BYR 2001-051, "Yankee Decommissioning Quality Assurance Program Periodic Update Submittal" dated June 22, 2001

(b) Letter, J. B. Hickman (USNRC), Yankee Nuclear Power Station – Issuance of Amendment No. 157 RE: Deletion of Operational and Administrative Requirements Following Fuel Transfer to ISFSI (TAC No. L52086), April 18, 2003

Subject: Yankee Decommissioning Quality Assurance Program Periodic Update Submittal

In accordance with 10CFR50.54(a)(3) and 10CFR50.71(e), this letter transmits Revision 31 of the Yankee Decommissioning Quality Assurance Program (YDQAP) to the NRC for the periodic update. Revision 30 to the YDQAP was transmitted to the NRC on June 22, 2001 (Reference (a)).

Additional organizational, responsibility, program applicability and administrative changes were implemented during 2001 through 2003, to date. Most of these changes were to incorporate the provisions of Amendment 157 to the YNPS Technical Specifications (Reference (b)). These changes have been included into Revision 31 of the YDQAP and are described in Attachment A to this letter. The changes are arranged in a format, which coincides with the sections of the YDQAP. These changes do not reduce the commitments within the YDQAP and continue to meet the requirements fo 10CFR50, Appendix B. Attachment A provides reasons for the changes, but may not discuss re-formatting, typographical changes, in accordance with 10CFR50.54(a)(3).

Please note that Revision 31 of the YDQAP has been issued for use. A copy of Revision 31 showing the changes and the description of the change from Revision 30 is also provided in Attachment A for your information.

MMSS01

If you have any questions, please contact Mr. Gerald P van Noordennon, Manager of Regulatory Affairs, at (413) 424-5261.

Sincerely,

YANKEE ATOMIC ELECTRIC COMPANY

Gerald P. van Noordennon
Manager of Regulatory Affairs

cc: H. Miller, Regional Administrator, NRC Region I
J. Hickman, Project Manager, NRC NRR
M. Virgilio, Director, Office of Nuclear Material Safety and Safeguards

QUALITY ASSURANCE PROGRAM

CHANGE REQUEST FORM

YDQAP CR 03-03

Request No: YDQAP CR 03-03 Date: 05/27/03

Requestor: C. M. Lloyd Plant ☒ YNPS ☐ HNP

I. CHANGE ☒ NO ☐ YES or REVISION ☐ NO ☒ YES

1.1 GENERAL DESCRIPTION OF CHANGE

YDQAP Revision 30/CR 03-02 to be revised to Revision 31.

2. PURPOSE OF CHANGE (see paragraph 1.1)

Incorporate CR 01-01, 02-01, 03-01 and 03-02 into Revision 31 for the purposes of performing the periodic update and submittal to the NRC in June 2003 as required by 10 CFR 50.71(e). The last update was provided to the NRC in June 2001. Reference YNPS Licensing Letter No. BYR 2001-051, dated 6/22/2001.

3. PROCEDURES AFFECTED ☒ NO ☐ YES

No procedures are impacted by this revision as procedure impact of the changes being incorporated was addressed under the individual change requests previously listed.

II. NUCLEAR SAFETY REVIEW AND EVALUATION

1. Are there other sections of the QAP affected?

☒ No ☐ Yes (List) _____

2. Does the proposed change reduce commitments of the QA program?

☒ No ☐ Yes (Bases) 50.54(a)(3) Evaluation

Don Calsyn 6/26/03 ☒ Approved ☐ Disapproved

D. Calsyn Manager, Nuclear Safety Date

See the 10 CFR 50.54(a)(3) Evaluations associated with Change Request 01-01, 02-01, 03-01 and 03-02. No further evaluation is required as Revision 31 to the YDQAP only incorporates changes previously evaluated under the listed change requests.

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ATTACHMENT A

YDQAP Summary of Changes - Revision 31

Item No.	YDQAP Section	Change Description	Reason for Change
1.	Signature Page	Updated titles and individual names as necessary. Change evaluated under CR 03-01.	YAEC Organizational Change
2.	Table of Contents	Updated Revision Levels as necessary	YDQAP Revision
3.	Policy Statement	Revised "final management responsibility" statement from "CEO and President" to "CEO". Change evaluated under CR 03-01.	YAEC Organizational Change
4.	Section I	Redistributed the responsibilities of the singular position of "CEO and President" to two positions titled; 1) "CEO" and 2) "President" and updated reporting lines as necessary in position descriptions and Figure 1 "YAEC Organization". Change evaluated under CR 03-01.	YAEC Organizational Change
5.	Section I and Appendix D	Removed reference to the title "Decommissioning Manager" when discussing the "Site Manager". Change evaluated under CR 03-02.	The position title of "Decommissioning Manager" has been eliminated with NRC approval of Amendment No. 157 to the YNPS Technical Specifications.
6.	Section I	Removed reference to "IRAC responsibilities as defined by the Technical Specifications" and replaced with "IRAC responsibilities as defined in Appendix D to the YDQAP". Change evaluated under CR 03-02.	Relocation of the Administrative Controls contained in the Technical Specification to Appendix D of the YDQAP was approved by NRC under Amendment No. 157 to the Technical Specifications.
7.	Section III	Completely revised sub-sections B and C. Change evaluated under CR 02-01.	Editorial corrections to reduce duplication of information and better align the terminology used with that provided in 10CFR50, Appendix B, Criterion III, Paragraph 71.107 and Paragraph 72.146.

YANKEE ATOMIC ELECTRIC COMPANY

ATTACHMENT A

YDQAP Summary of Changes - Revision 31

Item No.	YDQAP Section	Change Description	Reason for Change
8.	Section VII	Format correction to Sub-section C.2. Change evaluated under CR 02-01	Editorial correction to improve format consistency.
9.	Section VIII	Format correction to Sub-section B.1.c. Change evaluated under CR 02-01	Editorial correction to improve format consistency.
10.	Section IX	Revised in its entirety for editorial purposes. Change evaluated under CR 02-01.	Editorial corrections to reduce duplication of information and better align the terminology used with that provided in 10CFR50, Appendix B, Criterion IX, Paragraph 71.119 and Paragraph 72.158.
11.	Section X	Corrected format in sub-section C and split paragraph C.7 into C.7 and C.8 to better state the required actions. Change evaluated under CR 02-01.	Editorial correction to improve format and readability.
12.	Section XII	Split requirements contained in paragraph C.2 into C.2 and C.3 to better state the required action. Added additional guidance to paragraphs C.5 and C.6 to better state what is needed in determining accuracy. Revised paragraph B.1 and all of sub-section C as necessary to improve readability. Change evaluated under CR 02-01.	Editorial change to improve readability and provide additional clarity to the stated requirements.
13.	Section XVII	1. Added records retention requirements for 10CFR71 and 10CFR72 activities performed under the YDQAP. 2. Reformatted sub-sections A and B to be more consistent with the overall structure of the YDQAP. These changes included moving paragraphs A.2 and 3 to sub-section B as part of the Site Managers responsibilities.	1. To ensure records retention requirements of 10CFR71 and 10CFR72 are appropriately identified. 2. Editorial changes to improve format and ensure responsibility for the stated requirements is clearly stated.

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ATTACHMENT A

YDQAP Summary of Changes - Revision 31

Item No.	YDQAP Section	Change Description	Reason for Change
		3. Added as Paragraph B.1.c "those records required by Appendix D to this program and the Defueled Technical Specifications". Change evaluated under CR 02-01 and CR 03-02.	3. To ensure that records requirements are appropriately identified with the relocation of Administrative Controls from the Technical Specifications to the YDQAP under Amendment No. 157.
14.	Appendix C	1. Added Damaged Fuel Cans to the list of Important to Safety SSCs as defined by 10CFR71 and 10CFR72. 2. Added YDQAP applicability statement for NRC Licensed Radioactive Material Transport Packages 3. Added YDQAP applicability discussion for design and licensing controls of NRC licensed storage and transport packages subject to the provision of a NRC "General License" 4. Revised "Notes" 1 through 3; removed reference to specific revision numbers and identified design basis documents verses repeating design basis information. Change evaluated under CR 02-01 and 03-02.	1. To reflect the as loaded as licensed (NRC) YNPS ISFSI. 2. To clarify YDQAP applicability to 10CFR71 requirements. 3. To clarify that the NRC Certificate Holder is responsible for design and license controls of storage and transportation packages subject to the provisions of a "General License". 4. To improve maintainability of the YDQAP.

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ATTACHMENT A

YDQAP Summary of Changes - Revision 31

Item No.	YDQAP Section	Change Description	Reason for Change
15.	Appendix D	1. Removed the phrase "Unreviewed Safety Question" from discussion of 50.59 evaluations and replaced with "will not require prior NRC approval or a license amendment".	1. To reflect April 2001 50.59 rule change.
		2. Added "or designee" to all direction associated with Site Manager approval of a required action.	2. To reflect NRC approved amendment to the Technical Specifications.
		3. Added paragraphs B.4 (former paragraph is now B.5), 5.c, 5.d and sub-sections D through I.	3. To reflect NRC approval of Amendment No. 157 to the Technical Specifications.
		4. Modified paragraph B.3.b.	4. Same as item 3 above.
		5. Added "related to the safe storage of Spent Nuclear Fuel and GTCC Waste" to Paragraph B.1.	5. To further qualify the scope of the requirement for written procedures.
		6. Added 72.48 determinations to the scope of ISR (A.1) and IRAC (A.2) review requirements. Change evaluated under CR 01-01, 02-01 and 03-02.	6. To ensure appropriate Administrative Controls are applied to ISFSI related activities.

YANKEE ATOMIC ELECTRIC COMPANY

YANKEE DECOMMISSIONING QUALITY ASSURANCE PROGRAM

(YDQAP)

REVISION 31

PREPARED BY:

D. L. Calsyn
Nuclear Safety Manager

REVIEWED BY:

B. C. Wood
Site Manager – Yankee Nuclear Power Station

G. A. Maret
Vice President of Decommissioning

APPROVED BY:

R. M. Kacich
President

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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.

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.

YANKEE ATOMIC ELECTRIC COMPANY

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.

4. Site Manager

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, Licensing, 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

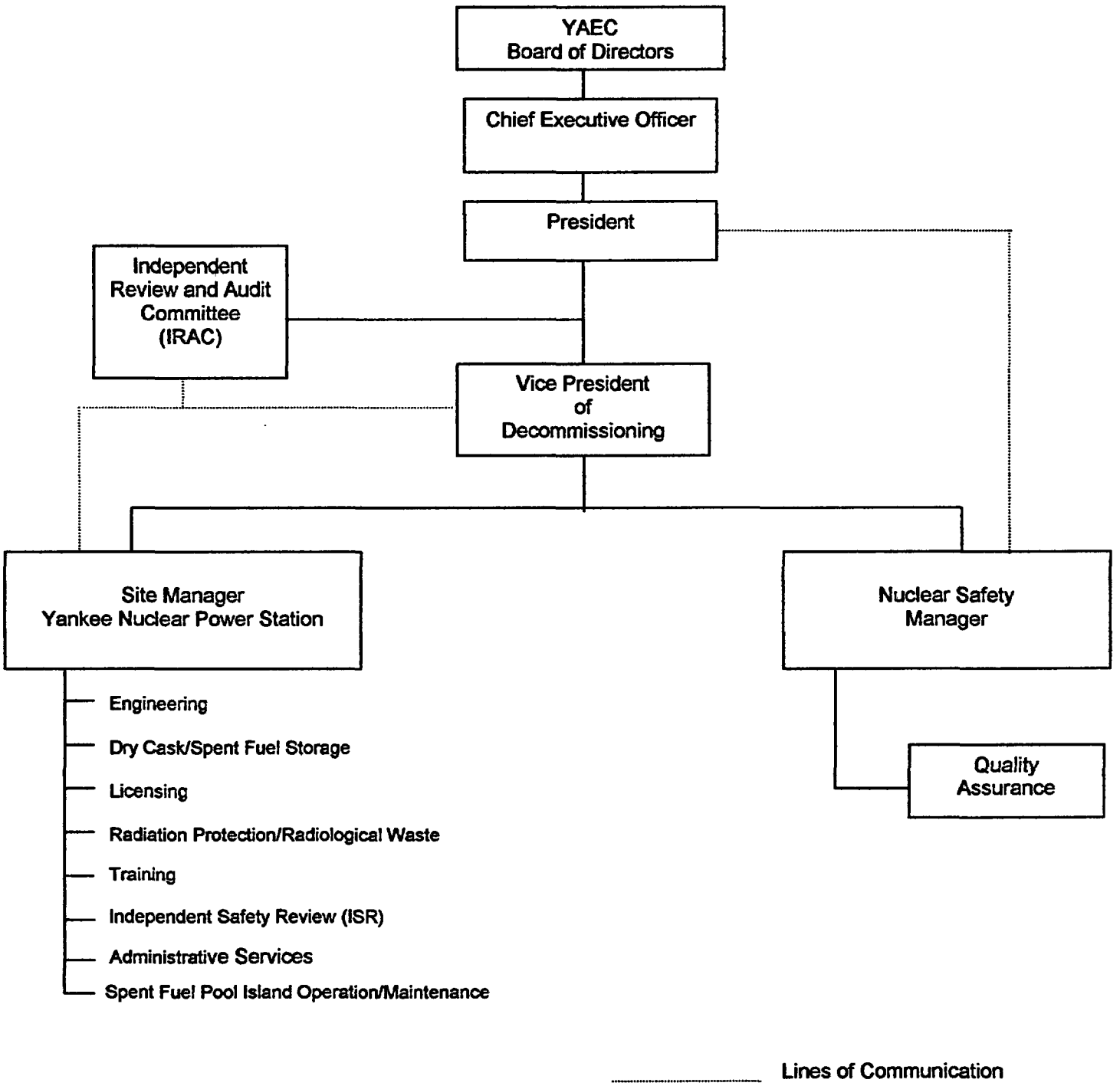
The Nuclear Safety Manager reports to the Vice President and is responsible for the Quality Assurance function. This individual is also responsible for providing oversight of the implementation and maintenance of the YDQAP and associated implementing procedures. The Nuclear Safety Manager provides reviews 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.

YANKEE ATOMIC ELECTRIC COMPANY

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 following Regulatory Guides and ANSI Standards are also utilized, when applicable, to meet the requirements of the YDQAP. 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. 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)

3. 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)

4. ANSI N45.2.3-1973, Housekeeping During the Construction Phase of Nuclear Power Plants (Endorsed by Regulatory Guide 1.39, Revision 2)

5. 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)

6. 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)

7. 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)

* 8. ANSI N45.2.10-1973, Quality Assurance Terms and Definitions

9. ANSI N45.2.11-1974, Quality Assurance Requirements for the Design of Nuclear Power Plants (Endorsed by Regulatory Guide 1.64, Revision 2)

10. ANSI N45.2.12-1977, Requirements for Auditing of Quality Assurance Program for Nuclear Power Plants (Endorsed by Regulatory Guide 1.144, Revision 1)

11. 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)

12. ANSI N45.2.23-1978, Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants (Endorsed by Regulatory Guide 1.146, August 1980)

13. ANSI N18.1-1971, Selection and Training of Nuclear Power Plant Personnel (Endorsed by Regulatory Guide 1.8, Revision 1-R)

* 14. Regulatory Guide 1.26, Revision 3, Quality Group Classifications and Standards for Water-, Steam, and Radioactive-Waste-Containing Components of Nuclear Power Plants

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

*Exceptions and alternatives to the provisions contained in this Standard/Guide are detailed in Appendix B.

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 ANSI N18.7, 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.

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 and/or ANSI N18.7 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.

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; ANSI N18.7, 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.

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

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.

D. IMPLEMENTATION

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.

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.

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, and ANSI N18.7.

   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.

YANKEE ATOMIC ELECTRIC COMPANY

APPENDIX B

Yankee Decommissioning Quality Assurance Program Exceptions

This Appendix details the exceptions to committed codes and standards noted in Section II of the YDQAP.

Appendix B Sub-Category	Standard/Guide	Title
I.	ANSI N45.2.9-1974	"Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants"
II.	ANSI N45.2.10-1973	"Quality Assurance Terms and Definitions"
III.	R.G. 1.64, Rev. 2	"Quality Assurance Requirements for the Design of Nuclear Power Plants"
IV.	ANSI N45.2.2-1972	"Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants"
V.	ANSI N45.2.6-1978	"Qualification of Inspection, Examination and Testing Personnel for the Construction Phase of Nuclear Power Plants"
VI.	R.G. 1.26, Rev. 3	"Quality Group Classifications and Standards for Water-, Steam- and Radioactive-Waste-Containing Components of Nuclear Power Plants"
VII.	ANSI N18.7-1976	"Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants"

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

A. EXCEPTION:

Subsection 5.6(3) Facility

The Yankee plant takes exception to "structures, doors, frames, and hardware should be Class A fire rated with a recommended four hour minimum rating."

ALTERNATIVE:

"Doors, structures, frames, and hardware shall be designed to comply with the requirements of a minimum two (2) hour fire rating, meeting NFPA No. 232 guidelines."

JUSTIFICATION:

The two (2) hour rating has been endorsed by the NRC Standard Review Plan NUREG-0800, Revision 2, dated July 1981.

II. ANSI N45.2.10 - 1973, "Quality Assurance Terms and Definitions"

A. EXCEPTION:

Subsection 2 - Terms and Definitions

The Yankee plant takes exception to the definitions of "Certificate of Conformance" and "Certificate of Compliance".

ALTERNATIVE:

The Yankee plant shall reverse the definitions of the above terms so our Program will be in compliance with the implied definitions in the ASME B&PV Code and Yankee specifications.

III. Regulatory Guide 1.64, Revision 2, "Quality Assurance Requirements for the Design of Nuclear Power Plants"

A. EXCEPTION:

Subsection c.2

The Yankee plant takes exception to the regulatory guide position on the exclusion of supervisors performing design verification.

ALTERNATIVE:

The Yankee plant will continue the accepted practices for independent design verification in accordance with the provisions of ANSI N45.2.11-1974, Section 6.1.

JUSTIFICATION:

The exclusion of line supervision to perform design verification has proven to be an unnecessary burden on the resources within the engineering organizations of the company, and counterproductive during heightened periods of engineering activities. ANSI N45.2.11 contains specific limitations on the situations in which a supervisor is permitted to perform design verification. The standard states, "This verification may be performed by the originator's supervisor provided the supervisor did not specify a singular design approach, or rule out certain design considerations and did not establish the design inputs used in the design, or if the supervisor is the only individual in the organization competent to perform the verification." This control was developed through realistic evaluation of the practicable limits that restrictions impose on engineering organizations by the working group that developed ANSI N45.2.11.

IV. ANSI N45.2.2 - 1972, "Packaging, Shipping, Receiving, Storage & Handling of Items for Nuclear Power Plants"

A. EXCEPTION:

Subsection 3.7.1 & A3.7.I - Containers

The Yankee plant takes exception to the specific requirements for containers.

ALTERNATIVE:

Containers shall be of suitable construction to assure material is received undamaged.

JUSTIFICATION:

Containers shipped by closed carrier, stored inside and not subjected to a wet environment do not require weather resistant fiberboard, therefore, this is an unnecessary expense. Additionally, numerous vendors utilize shipping containers that do not comply with the specific requirements of this section, i.e., flaps overlap. The acceptance criteria for a shipping container should be established based on the capability of the container to maintain the component material in a safe condition. Technology has advanced beyond the standard.

B. EXCEPTION:

Subsection 3.7.2 - Crates and Skids

The Yankee plant takes exception to the requirement that skids and runners shall be used on boxes with a gross weight of 100 pounds or more.

ALTERNATIVE:

Skids or runners shall be used on boxes with a gross weight of 100 pounds or more if practical.

JUSTIFICATION:

Storage methods and container design frequently are such that runners or skids are not feasible.

C. EXCEPTION:

Subsection 5.2.1 - Shipping Damage Inspection

The Yankee plant takes exception to the requirement that a preliminary visual inspection or examination be performed prior to unloading.

ALTERNATIVE:

The Yankee plant shall perform those required inspections after unloading. In special instances, preunloading inspections shall be performed.

JUSTIFICATION:

Post unloading inspection is adequate to determine any damage that may have been incurred during shipping and handling.

D. EXCEPTION:

Subsection 5.2.2 - Item Inspection

The Yankee plant takes exception to the requirement, that "The inspections shall be performed in an area equivalent to the level of storage requirements for the item."

ALTERNATIVE:

The Yankee plant shall perform receiving inspection in a manner and in an environment which do not endanger the requisite quality of the item; however, receiving area environmental controls may be less stringent than storage environmental controls for that item. When inspections are performed in receiving areas with environmental controls less stringent than storage area environmental controls, a time limit shall be established on a case basis for retention of items in the receiving area. Retention time shall be such that deterioration is prevented and applicable manufacturer recommendations are addressed.

JUSTIFICATION:

Receipt inspection activities are for a much shorter duration and therefore should not be subjected to the same stringent requirements as required for storage.

E. EXCEPTION:

Subsection 5.2.3 - Special Inspection

The Yankee plant takes exception to attaching special inspection procedures to the item or container.

ALTERNATIVE:

Special inspection procedures shall be readily available to personnel performing inspections.

JUSTIFICATION:

Procedures are subject to less abuse and more stringent controls when maintained on file and not attached to the item. Inspection status is maintained by tagging and procedure control.

F. EXCEPTION:

Subsection 6.1.2 - Levels of Storage

The Yankee plant takes exception to two specific requirements associated with fuel storage (classified Level A).

ALTERNATIVE:

The Yankee plant shall meet the requirements of Level A storage for new fuel with the exception of special air filtering; and temperature and humidity controls.

JUSTIFICATION:

The existing storage conditions at the Yankee plant is consistent with the protection provided to the fuel while in storage at the manufacturer (vendor) and/or while in transit to the plant site and are judged to provide adequate protection to the fuel assembly structure which is of highly corrosion resistant materials. We believe that the above listed requirements are intended for application at the manufacturing facility (vendor) where the uranium pellets may be exposed to the atmosphere and not in its fully encapsulated, and therefore, fully protected form in a completed fuel assembly.

G. EXCEPTION:

Appendix A-3 Subsection A3.5.1(1) - Caps & Plugs

The Yankee plant takes exception to the requirement that nonmetallic plugs and caps shall be brightly colored.

ALTERNATIVE:

Nonmetallic plugs and caps shall be of a contrasting color.

JUSTIFICATION:

The purpose of utilizing brightly colored plugs and caps is to assist in assuring obstructions are not inadvertently placed in operating components or systems. By using plugs and caps of a contrasting color this objective can be achieved.

H. EXCEPTION:

Appendix A-3 Subsection A3.9(1) - Second Group, Markings

The Yankee plant takes exception to the requirement that container markings shall appear on a minimum of two sides.

ALTERNATIVE:

Containers shall be adequately marked to provide identification and retrievability.

JUSTIFICATION:

Containers are tagged to provide identification and inspection status. Employment of two tags on small containers adds bulk and confusion and does not provide for better identification or traceability.

I. EXCEPTION:

Appendix A-3, Subsection A.3.9(4) - Second Group, Marking

The Yankee plant takes exception to the requirement that container markings shall be no less than 3/4" high, container permitting.

ALTERNATIVE:

Container markings shall be of a size which permits easy recognition.

JUSTIFICATION:

Markings were intended to provide identification and instructions. The criteria should be that the markings clearly provide the same.

J. EXCEPTION:

Appendix A-3 Subsection A.3.9(6) - Second Group, Marking

The Yankee plant takes exception to the information required for container marking.

ALTERNATIVE:

Marking shall be adequate in each case to provide identification, traceability and instructions for special handling, as applicable.

JUSTIFICATION:

The information required is excessive. Cluttering a container with excessive markings only reduces the main objectives, maintaining identification and establishing special controls.

V. ANSI N45.2.6 - 1978, "Qualification of Inspection, Examination and Testing Personnel for Nuclear Power Plants"

A. EXCEPTION:

The Yankee plant takes exception to the application of the Standard to all Yankee personnel performing inspection, examination and testing.

ALTERNATIVE:

Yankee personnel identified in ANSI N18.1-1971 who perform inspection, examination and testing will be qualified to ANSI N18.1-1971.

Yankee personnel not identified in ANSI N18.1-1971 who perform inspection, examination and testing will be qualified to ANSI N45.2.6-1978.

VI. Regulatory Guide 1.26, Rev. 3, (2/76), "Quality Group Classifications and Standards for Water-, Steam- and Radioactive-Waste-Containing Components of Nuclear Power Plants"

A. EXCEPTION:

The Yankee plant takes exception to the Regulatory Guide in its entirety.

ALTERNATIVES:

The Yankee plant shall continue to classify structures, components and systems in accordance with ANSI Standard N18.2, January 1973, "Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants", as in the past.

VII. ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants"

EXCEPTION:

Subsection 5.2.15 - Review, Approval and Control of Procedures

The Yankee Plant takes exception to the following paragraph;

"Plant procedures shall be reviewed by an individual knowledgeable in the area affected by the procedure no less frequently than every two years to determine if changes are necessary or desirable".

ALTERNATIVES:

Plant procedures will be periodically reviewed in accordance with administrative controls. These controls will establish a schedule for these periodic reviews. All applicable plant procedures will be reviewed following an unusual incident, unexpected transient, operator error, or equipment failure (malfunction), and following a modification to a system.

Nonroutine procedures such as Emergency Plan Implementing Procedures, or other procedures whose use may be event driven, will be reviewed every two years.

However, if a nonroutine procedure is fully exercised and there is a detailed scrutiny of the entire procedure as part of a documented training program, this may serve as the biennial review of the procedure used.

At least every two years, the Quality Assurance (or other independent) organization shall audit a representative sample of routine plant procedures that are used more frequently than every two years. The audit is to ensure the acceptability of the procedures and verify that the procedure review and revision program is being implemented effectively. The root cause of significant deficiencies is to be determined and corrected.

JUSTIFICATION:

The current requirement to review each safety-related procedure on a biennial cycle results in the expenditure of significant technical and administrative resources. Programmatic controls and practices are in place to provide adequate reviews, including the following:

- The plant modification processes require that procedures affected by the modification be identified during the design change preparation, and revised prior to closure of the modification package.

- Administrative controls currently exist requiring that if a procedure cannot be performed as written, a procedure change must be completed prior to continuation of the procedure.

- Temporary changes are occasionally generated during, or prior to procedure use. Current administrative controls require that those changes that are permanent shall be incorporated into the procedure via the procedure revision process.

- As part of the audit and surveillance process, procedures are evaluated as to adequacy, ease of use, proper technical content, and compliance with applicable plans and programs.

- The corrective action process requires that a root cause analysis be performed for events, violations and nonconforming conditions. Where identified as contributing factors, procedure changes are initiated.

- Changes to Technical Specifications and the FSAR are reviewed for potential impact on, and initiation of changes to plant procedures.

- Plant procedures are approved by appropriate personnel prior to initial use. Current administrative controls also require pre-job briefings for procedures identified as infrequent.

This modification meets the intent of published regulatory requirements involving activities important to safety.

YANKEE ATOMIC ELECTRIC COMPANY

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.

YANKEE ATOMIC ELECTRIC COMPANY

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.