APPENDIX C
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GUIDELINES FOR DETERMINATION OF TVA IDENTIFIED QUALITY-RELATED CLASSIFICATIONS

1.0 INTRODUCTION

The guidelines for classifying components, systems, and activities as quality-related depend on the relationship of the terms quality-related and safety-related as discussed in 2.0 and 3.0 below. The guidelines are contained in section 4.0 of this Appendix.

2.0 QUALITY-RELATED

Quality-related (QR) is a term which encompasses quality assurance program requirements that describe activities which affect structures, systems, and components. These requirements provide reasonable assurance that the facility can be operated without undue risk to the health and safety of the public. It encompasses the broad class of plant features covered (not necessarily explicitly) in the General Design Criteria that contribute in important ways to the safe operation and protection of the public in all phases and aspects of facility operation (i.e., normal operation and transient control as well as accident mitigation).

Quality-related is more encompassing than the term safety-related. Appendix D shows the scope of the NQAP. All quality-related items and activities are not necessarily safety-related. Appendix D illustrates the programmatic relationships.

3.0 SAFETY-RELATED

Use of the term safety-related (or variations thereof) and the methodology for classifying items and activities as safety-related has been established in the General Design Criteria and Safety Analysis Report for TVA's Browns Ferry, Sequoyah, Watts Bar, and Bellefonte Nuclear Plants. The term safety- related as used in this Appendix, this plan and in NQAP documents is generic in nature.

Items and activities classified as safety-related are subject, without exception, to the requirements of 10 CFR 50, Appendix B. All safety-related items and activities are also quality-related.

4.0 GUIDELINES

Some items and activities are classified as quality-related but not safety-related. However, because some items and activities classified as quality-related are considered important to the continued reliable operation of TVA's nuclear facilities, TVA shall apply the requirements of all or selected parts of the NQAP to such items and activities.

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4.1 Structures, systems, and components shall be classified as quality-related but not safety-related if they fit one or more of the following categories:

A. Contain radioactive material and have not been identified as safety-related.

B. Are required by ANS 3.2/ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants," and are not identified as safety-related (e.g., plant security system).

C. Are fire protection features that provide protection for safety-related structures, systems, or components.

D. Are structures, systems, and components that have environmental or operability requirements important to the safe operation of the unit (as specified in the Plant Technical Specifications).

E. Are structures, systems, and components that could impact reliability and operability goals recommended by NE and NPP and approved by the Senior Vice President of Nuclear Power.

4.2 Some components and systems have been identified as "nonnuclear safety" (NNS) in the FSAR for each TVA nuclear plant. Those components and systems identified as NNS in the FSARs shall be classified as quality-related.

4.3 Those components or systems designated as Seismic Category I (L) in each nuclear plant FSAR shall be classified as quality-related. Seismic Category I (L) is the nonsafety-related portion of Seismic Category I. (Refer to Appendix D.)

4.4 Additional components or systems, not identified in the FSARs as NNS or Seismic Category I(L,) can be designated as quality-related but not safety-related. Such additional components or systems could include the following:

A. Plant security system.

B. Plant radiological controls and radwaste systems.

C. Other structures, systems, and components which have special environmental or operability requirements.

D. Structures, systems, or equipment designated by NP management as requiring some level of quality control because of their importance to plant reliability or operability.

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4.5 Items to which one or more of the following regulatory documents are applicable should be considered for classification as quality-related.

A. Regulatory Guide 1.143, "Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants."

B 10 CFR 71, Subpart H, "Quality Assurance (Packaging and Transportation of Radioactive Material)."

C. Regulatory Guide 1.29, "Seismic Design Classification."

D. 10 CFR 73.55, "Requirements for Physical Protection of Licensed Activities in Nuclear Power Reactors Against Radiological Sabotage."

E. 10 CFR 50.62, "Requirements for Reduction of Risk From Anticipated Transients Without Scram (ATWS)."

F. 10 CFR 50, Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979."

G. ANS 3.2/ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants."

H. Regulatory Guide 1.33, Revision 2, February 1978, "Quality Assurance Program Requirements (Operation)."

I. NRC letter from H. J. Thompson Jr. dated April 16, 1985, "Quality Assurance Guidance for ATWS Equipment That is Not Safety Related." Generic Letter 85-06, (A02 850422 044).

J. NRC letter from D. G. Eisenhut dated April 24, 1986, "Implementation of Fire Protection Requirements," Generic Letter 86-1 (A02 860512 005).

K. NUREG 0800, Section 9.5.1, Branch Technical Position, CMEB 9.5-1 (formerly BTP ASB 9.5-1), Revision 2, July 1981, "Fire Protection for Nuclear Power Plants."

L. Appendix A to Branch Technical Position APCSB 9.5-1, August 23, 1976.

4.6 New systems (or items being added as a result of approved modifications) shall be classified on the same basis as the existing components or systems.

4.7 Classification of components or systems as quality-related but not safety-related shall be performed in accordance with approved NE procedures or at NP management direction.

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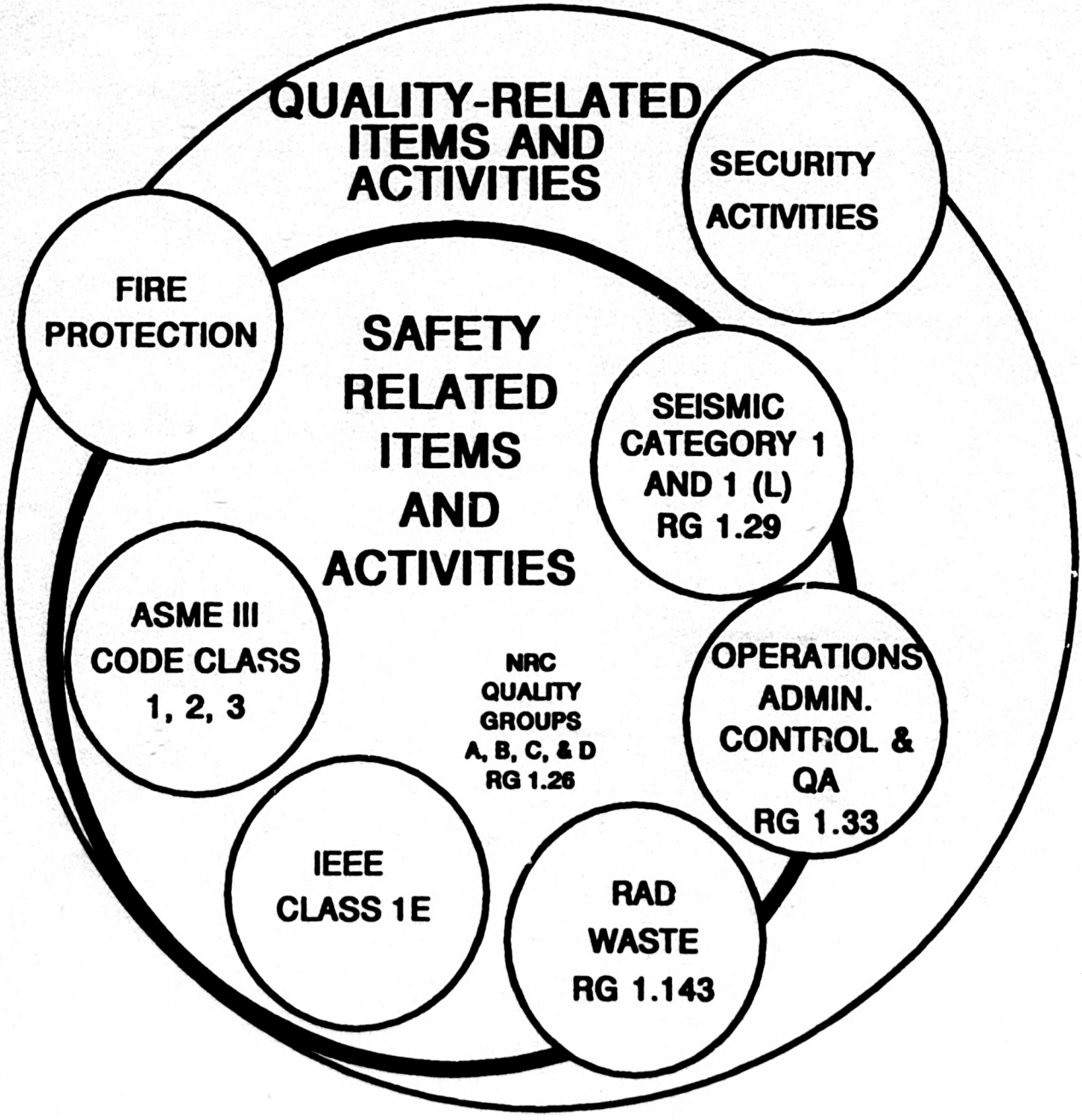
SCOPE OF NP NUCLEAR QA PROGRAM



This diagram displays the relationship of safety-related to quality-related items and activities. Examples of these items and activities are shown. It is not intended to show each specific item and activity within the scope of the Nuclear QA Program.

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COMPUTER SOFTWARE

The requirements of section 13.0 apply to computer software that is used to:

1. Directly operate safety-related plant equipment.

2. Generate design output which defines or prescribes activities affecting safety-related functions or equipment (e.g., cable pull slips).

3. Directly interface with control room personnel and is used by them without further verification to make decisions affecting:

   a. The integrity of the reactor coolant pressure boundary.

   b. The capability to shut down the reactor and maintain it in a safe condition.

   c. The capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposure comparable to the 10 CFR 100 guidelines.

4. Perform calculations which are not subsequently verified and which result in acceptance of inspection or test data for quality-related equipment.

5. Design or aid in the design of quality-related structures, systems, or component.

6. Generate output that is used without further verification as input to the design of a quality-related item.

7. Generate output that is not verified for accuracy and is used to procure quality-related items.

8. Maintain or control descriptive information for output used in the procurement of quality-related items.

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DEFERRED PLANT QUALITY ASSURANCE PROGRAM

During the period of plant deferral, a QA program will be implemented which concentrates on the activities being performed and ensuring that the quality and licensability of the deferred plant are maintained.

The program which will be implemented is based on the guidance provided in NRC Generic Letter 87-15 dated November 4, 1987, and the NRC Policy Statement on "Deferred Plants" published in the Federal Register, Volume 52, No. 198, dated October 14, 1987. This program does not reduce 10 CFR 50, Appendix B requirements but focuses efforts where they are deemed necessary. A description of this program was submitted to the NRC on July 29, 1988.

Program Implementation

During the period of plant deferral, implementation of the following QA programmatic elements will be accomplished through written, reviewed, and approved procedures. These procedures will include as a minimum:

1. A description of the organizational structure for the plant showing functional relationships of personnel.

2. An indoctrination and training program, including the qualifications, responsibilities, and duties of personnel performing quality-related activities. The range of training will be structured to that needed for ongoing activities during deferral.

3. A construction status when work was suspended, including control of deviations from the established status which occur during the deferral period.

4. Control of Measuring and Test Equipment (M&TE) used during deferral, including identification, calibration, and evaluation of out-of-calibration equipment.

5. Control of work, including verification by the line organizations.

6. Program for inspection by Quality Control/Quality Assurance personnel using a graded approach.

7. Program for operation of equipment and systems which continue in operation or must be operated periodically.

8. Program for maintenance and lay-up of systems including:

   a. Establishment of acceptable conditions, periodic testing, and restoration of acceptable conditions during lay-up.

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b. A listing identifying the location, storage level, and/or preventive maintenance requirement for all permanent plant equipment and materials important to safety.

9. Identification, reporting, and correction of conditions adverse to quality, including 10 CFR 21 and 10 CFR 50.55(e) items.

10. Collection, retention, and protection of records, including procedures, drawings, and controlled documents.

11. Scheduling and performance of audits and monitoring, concentrating on activities being performed and programs in place.

12. Program for plant security and access control.

Nuclear Quality Assurance (NQA) is responsible to ensure that the methods utilized by each organization responsible for the deferred QA program meet applicable QA program requirements.

Existing site procedures which are not being utilized during the period of deferral will be placed in an inactive status. Should an activity be required during deferral, the applicable procedure will be activated, reissued, and reviewed prior to the conduct of the activity.

At the end of the deferral period, the respective plant will be subject to the QA program described in this plan.

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TYPES OF CONTROLLED DOCUMENTS AND MANUALS |Q-23

1. Design Specifications and Drawings
2. Nuclear Quality Assurance Manual
3. Safety Analysis Reports
4. Program Manuals
5. Plant Instructions
6. Nuclear Fuel Procedures Manual
7. Radiological Protection Plan
8. Nuclear Engineering Procedures Manual
9. NE Site Engineering Project Manuals
10. QA Manual for ASME Section III Power Plant Components (NCM)
11. Nuclear Procedures System Manuals
12. As-built Documents
13. Computer Programs
14. Nonconformance Reports
15. NQA Plan
16. System Descriptions
17. Topical Report

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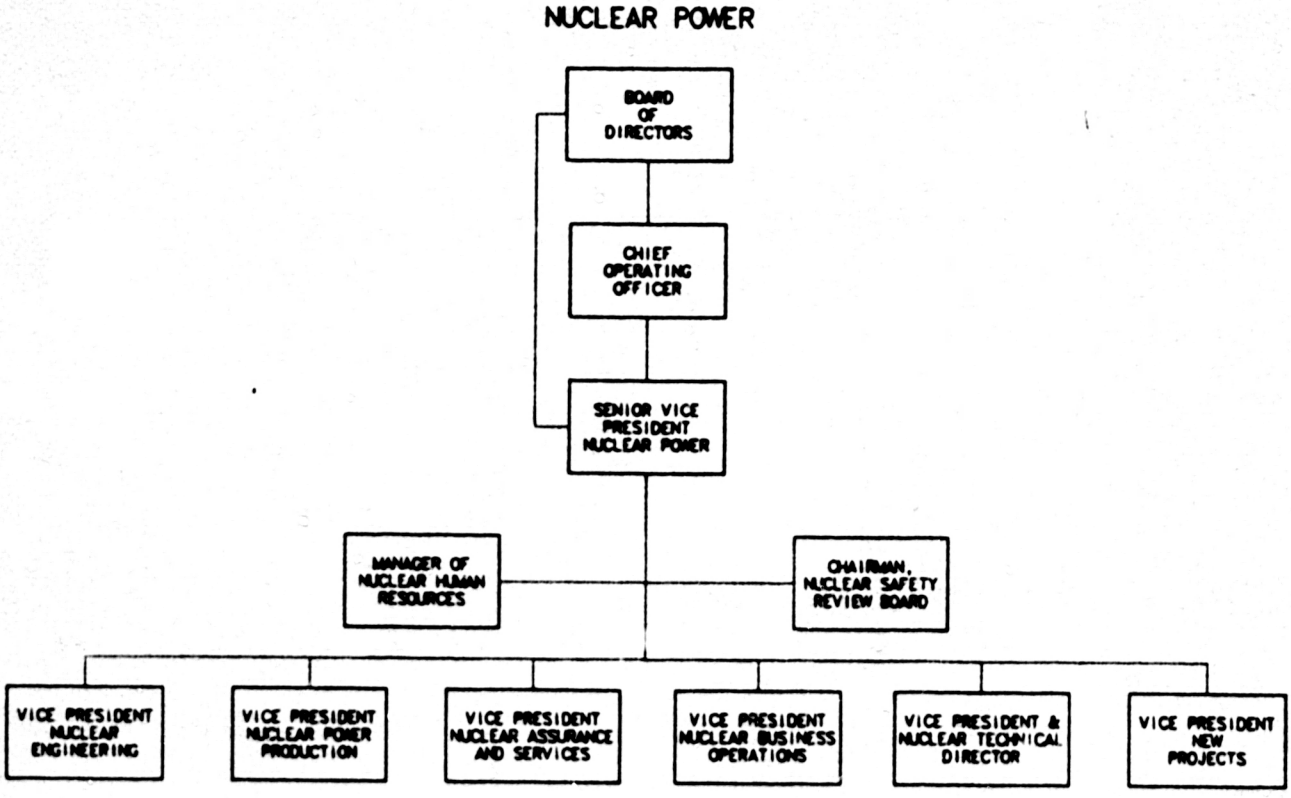
ORGANIZATION CHARTS



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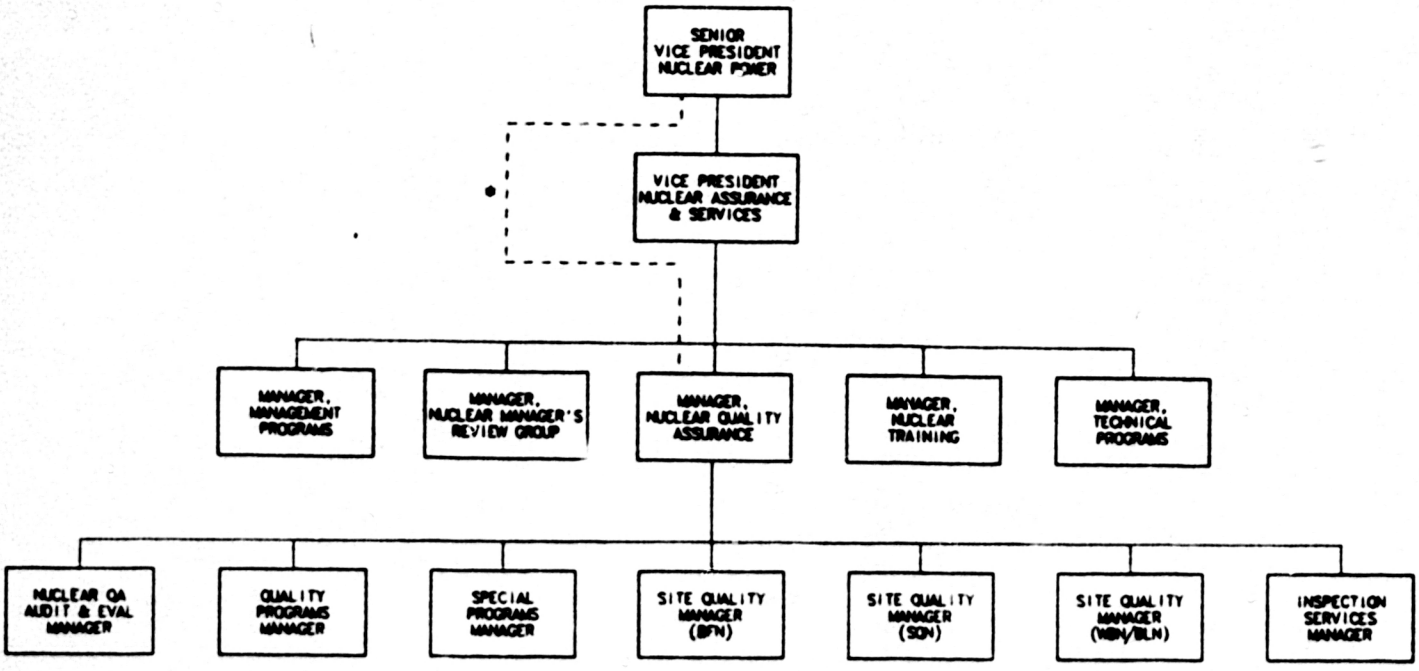
NUCLEAR POWER
NUCLEAR ASSURANCE AND SERVICES



* INDEPENDENT REPORTING TO THE SENIOR VICE PRESIDENT ON QUALITY STATUS AND ISSUES

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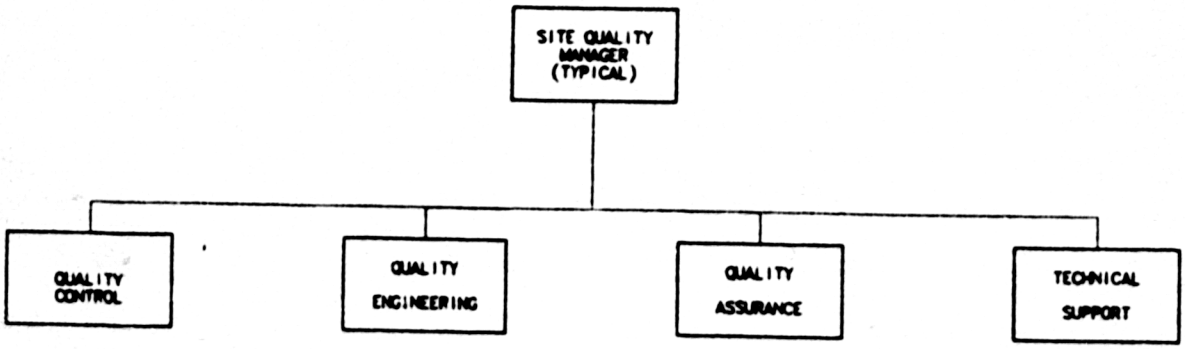
ORGANIZATION CHARTS

NUCLEAR POWER
NUCLEAR ASSURANCE AND SERVICES
NUCLEAR QUALITY ASSURANCE
SITE QUALITY (TYPICAL)



APPENDIX I

COMPARISON MATRIX OF QUALITY ASSURANCE PLAN REQUIREMENTS WITH THOSE OF 10 CFR 50, APPENDIX B AND SELECTED ANSI STANDARDS

10 CFR 50, Appx B		ANSI N45.2 - 1971		ANSI N18.7 - 1976	
Criterion	NQA Plan	Section	NQA Plan	Section	NQA Plan
I	4.0;4.1	2.0	5.0	3.1	4.1;5.0
II	5.0	3.0	4.0;4.1	3.2	4.0;4.1
III	7.0	4.0	7.0	3.3	11.0
IV	8.1	5.0	8.1	3.4	4.0;11.0
V	6.0;7.0	6.0	6.0;7.0	4.0	5.3;6.0
VI	6.0;7.0	7.0	6.0;7.0		7.2;12.0
VII	8.2	8.0	8.2	5.1	5.0
VIII	8.3	9.0	8.3	5.2.1	4.0
IX	9.3	10.0	9.3	5.2.2	6.0
X	9.1	11.0	9.1	5.2.3	6.0
XI	9.4	12.0	9.4	5.2.4	6.0
XII	9.5	13.0	9.5	5.2.5	6.0
XIII	9.6	14.0	9.6	5.2.6	6.0;9.7
XIV	9.7	15.0	9.7	5.2.7	6.0;9.8
XV	10.0	16.0	10.0	5.2.8	6.0;9.1;9.4
XVI	10.0	17.0	10.0	5.2.9	5.1;6.0
XVII	6.3	18.0	6.3	5.2.10	4.1.2;6.0
XVIII	12.0	19.0	12.0	5.2.11	6.0;10.0
				5.2.12	6.0;6.3
				5.2.13	6.0;8.0;9.6
				5.2.14	6.0;10.0
				5.2.15	6.0
				5.2.16	6.0;9.5
				5.2.17	6.0;9.1
				5.2.18	6.0;9.3
				5.2.19	6.0;9.4
				5.3	6.0
				5.3.1	6.0
				5.3.2	6.0
				5.3.3	6.0
				5.3.4	6.0
				5.3.5	6.0;9.8
				5.3.6	6.0;5.1
				5.3.7	6.0;9.5
				5.3.8	6.0;5.1
				5.3.9	6.0;5.1
				5.3.10	6.0;9.1;9.4

MATRIX OF NRC STANDARD REVIEW PLAN PART II, ACCEPTANCE CRITERIA, DESIGN AND CONSTRUCTION (REV. 2, JULY 1981) TO TVA NQA PLAN

SRP SECTION TITLE	RQMT. NO.	TVA NQA PLAN RQMT. NO.
Organization	1A1	1.0; 2.0; 5.0; 3.1; 4.1.1; Q.A. Policy Statement
	1A2	2.0; 4.1; 5.0
	1A3a	3.1; 4.1 (all); 4.0
	1A3b	4.1.9D; 3.3.3
	1A3c	4.1.2H
	1A4	5.0
	1A5	4.1.1; 4.0; FSAR Chap. 13; 4.1.8B; Appdx H
	1A6	4.1 (all); 4.0; FSAR Chap. 13
	1B1	4.1.9; Q.A. Policy Statement
	1B1a	3.3.2; 4.1.8B.1
	1B1b	3.3.2; 3.3.3; 3.3.5; 4.1.8B.1
	1B1c	5.0; 4.1.9.G.2.e; 4.1.9.G.3.d
	1B1d	4.1.9 (Responsibilities defined)
	1B2	3.3.2; 9.1.2.A
	1B3a	3.3.2A
	1B3b	3.3.2B
	1B3c	3.3.2C
	1B3-2nd para.	Appendix H; 4.1.8
	1B4a	4.1.9E; 4.1.9G.3f; 10.2.6; 3.3.2D
	1B4b	3.3.2D, 4.1.2I, 4.1.8.A10, 4.1.9.3g, 10.3.C | Q-10
	1B5	Q.A. Policy Statement; 3.3.5
	1B6	4.1.9G.3f
	1C1	3.1; 5.3; NQA Policy Statement
	1C2 (all)	4.1.8B.1; 4.0; 3.3.2; 3.3.3; 3.3.5; 4.1.9.G.3; P&OM, PD DQA-11-00
	1C3	4.1.9G.3; FSAR Chap. 13

MATRIX OF NRC STANDARD REVIEW PLAN PART II, ACCEPTANCE CRITERIA, DESIGN AND CONSTRUCTION (REV. 2, JULY 1981) TO TVA NQA PLAN

SRP SECTION TITLE	RQMT. NO.	TVA NQA PLAN RQMT. NO.
Quality Assurance Program	2A1a	2.0; 3.1; 5.1A; 5.1.B FSAR Chap. 17 (SQN, WBN); FSAR App. D (BFN)
	2A1b	9.4 (all); 9.4.2A.4 pre-op test)
	2A1c	13.0 (all); Appendix E
	2A1d	5.1B.7; 4.1.8B.4b
	2A1e	5.1B
	2A2	5.4
	2B1a	5.3; 5.0; 5.4; Q.A. Policy Statement
	2B1b	4.1.9.G.2.e; 4.1.9.G.3.d
	2B1c	4.1; 4.0; Q.A. Policy Statement
	2B1d	4.1.9.G.2.e; 8.2.3
	2B2	5.5
	2B3	14.1; 14.2; App. B; 5.2A; 5.2B; 7.2.1H
	2B4	3.2; 3.3; 5.4; App. B
	2B5	3.1; 5.4
	2C1	3.3.3
	2C1a	4.1.2G; 3.3.3
	2C1b	4.1.2B; 4.1.2F; 3.3.3; 4.1.9D
	2C2	4.1.2C; 4.1.2H
	2C3	4.1.4G; 5.0
	2Da	11.0; 4.1.2H
	2Db	11.0
	2Dc	11.2.1D; 11.2.1E
	2Dd	11.2.1B

ENCLOSURE 2

MATRIX OF NRC STANDARD REVIEW PLAN
PART II, ACCEPTANCE CRITERIA, DESIGN AND CONSTRUCTION
(REV. 2, JULY 1981) TO TVA NQA PLAN

SRP SECTION TITLE	RQMT. NO.	TVA NQA PLAN RQMT. NO.
Quality Assurance Program (continued)	2De	11.2.2A
	2Df	11.2.1B
	2Dg	11.0 (all)
Design Control	3A	7.1; 7.2.1A
	3B	7.2.1E
	3C1	7.2.1J
	3C2	7.2.2A
	3D	7.2.4
	3E1	7.2.5; 7.2.6; 7.2.7
	3E2	4.1.9; 7.2.5
	3E3	7.2.6B
	3E4a	7.2.6C
	3E4b	7.2.6D; 7.2.6E; 7.2.6F
	3E4c	6.2.2A.1
	3E4d	7.2.6B
	3E3a	7.2.6B; 7.2.6F
	3E3b	7.2.6F
	3E3c	7.2.6F
	3E4	13.1; 13.2
	3F1	7.2.7A; 7.2.7B
	3F2	Appendix B
Procurement Document Control	4A1	8.1.2A.1; 8.1.2A.10; 8.1.2B.3, 8.1.2C
	4A2	8.1.2B.1

ENCLOSURE 2

MATRIX OF NRC STANDARD REVIEW PLAN
PART II, ACCEPTANCE CRITERIA, DESIGN AND CONSTRUCTION
(REV. 2, JULY 1981) TO TVA NQA PLAN

SRP SECTION TITLE	RQMT. NO.	TVA NQA PLAN RQMT. NO.
Procurement Document Control (continued)	4B1	8.1.2A (all); 8.1.2B 8.1.2C
	4B2	Appendix B
Instructions, Procedures, and Drawings	5A	6.1.1; 6.1.3; 7.2.1C; 7.2.5D
	5B	6.1.2A.1; 7.2.5C
Document Control	6A1a-h	6.2.2A.1; Appendix G
	6A2	6.1.1; 6.1.2; 6.2.1
	6A3	6.1.2F; 6.2.1; 7.2.7B
	6A4	6.2.1
	6B1	6.2.2A.3
	6B2	6.2.2A.2
	6C1	7.2.7F
Control of Purchased Material, Equipment, and Services	7A1	8.2.3
	7A2a & b	8.2.2C (all); 4.1.9.G.2b
	7A3	8.2.2A (all); 4.1.9.G.2a
	7A4	8.1.2B.8
	7B1a	8.2.2F.1
	7B1b	8.2.2F.3
	7B1c	8.2.2F.3
	7B2	8.2.2G
	7B3a	8.1.2B.6
	7B3b	8.1.2B.6; 8.1.2B.9
	7B3c	8.1.2B.9
	7B4	8.1.2B.8
	7B5	8.1.2A.10; 8.2.2C.2; 8.2.2C.3
	7B6	Appendix B

MATRIX OF NRC STANDARD REVIEW PLAN PART II, ACCEPTANCE CRITERIA, DESIGN AND CONSTRUCTION (REV. 2, JULY 1981) TO TVA NQA PLAN

SRP SECTION TITLE	RQMT. NO.	TVA NQA PLAN RQMT. NO.
Identification and Control of Materials, Parts, and Components	8A	8.3.1; 8.3.2, 8.3.3
	8B1	8.3.1; 8.3.2B
	8B2	8.3.1; 8.3.2B
	8B3	8.3.2A
Control of Special Processes	9A1	9.3.1; 9.3.2A
	9A2	9.3.3
	9B1	9.3.2B; 9.3.3C
	9B2	9.3.2E
	9B3	9.3.2D.3
Inspection	10A	9.1.2B; 9.1.2B.1; 9.1.3
	10B1	3.3.2; 9.1.2C; 9.1.2B.1; 11.2.2
	10B2	9.1.2C2; 11.2.2 (all)
	10C1a	9.1.2.B
	10C1b	9.1.2.B.3
	10C1c	9.1.2B
	10C1d	9.1.2B
	10C1e	9.1.1; 9.1.2B.1; 6.2.2; 7.2.1
	10C1f	9.1.2D.2
	10C1g	9.1.2C.3
	10C2	9.1.2B.2; 9.1.2C.4
	10C3	9.1.2D.2; 9.1.2D.3
Test Control	11A1	9.4.2A (all); 9.4.2B (1&2); 9.5.2A.3
	11B1a	9.4.2B.1
	11B1b	9.4.2B.3b
	11B1c	9.4.2B.3c

ENCLOSURE 2

MATRIX OF NRC STANDARD REVIEW PLAN
PART II, ACCEPTANCE CRITERIA, DESIGN AND CONSTRUCTION
(REV. 2, JULY 1981) TO TVA NQA PLAN

SRP SECTION TITLE	RQMT. NO.	TVA NQA PLAN RQMT. NO.
Test Control (continued)	11B1d	9.4.2B.3e
	11B1e	9.4.2B.3f
	11B1f	9.4.2B.3g
	11B1g	9.4.2B.3d
	11C1	9.4.2C (all); 9.4.2D
Control of Measuring and Test Equipment	12.1	9.5.1; 9.5.2A.1
	12.2	9.5.3; 9.1.2C.3
	12.3	9.5.2A.1; 9.5.2A.4; 9.5.2D (all)
	12.4	9.5.2D.6
	12.5	9.5.2A.3; 9.5.2B.3
	12.6	9.5.2A.3; 9.5.2B.4
	12.7	9.5.2B.4; 9.5.2.C.1
	12.8	9.5.2A.7
	12.9	9.5.2A.5
Handling, Storage, and Shipping	13.1	9.6.1; 9.6.2C
	13.2	9.6.1; 9.6.2B-D
	13.3	Appendix B
Inspection, Test, and Operating Status	14.1	9.7.2A
	14.2	9.7.2A.2; 9.7.2B.1
	14.3	9.7.2A.4
	14.4	10.2.1A
Nonconforming Materials, Parts, or Components	15.1	10.2.1A,B; 10.2.2C; 10.2.2F
	15.2	10.2.2C; 10.3
	15.3	10.2.1A,B
	15.4	10.2.1B
	15.5	10.2.5

ENCLOSURE 2

MATRIX OF NRC STANDARD REVIEW PLAN PART II, ACCEPTANCE CRITERIA, DESIGN AND CONSTRUCTION (REV. 2, JULY 1981) TO TVA NQA PLAN

SRP SECTION TITLE	RQMT. NO.	TVA NQA PLAN RQMT. NO.
Corrective Action	16.1	10.2.2
	16.2	10.2.2E (Not specifically NQA)
	16.3	10.2.2G (Not specifically NQA)
	16.4	10.2.2E; 10.2.2F
Quality Assurance Records	17.1	6.3.2B; Appendix B
	17.2	6.3.3
	17.3a	9.1.2D.2
	17.3b	9.1.2D.2
	17.3c	9.1.2D.2
	17.3d	9.1.2D.2
	17.3e	9.1.2D.5
	17.3f	9.1.2D.2
	17.4	6.3.2D; 6.3.2E; App. B
	17.4 (1)	6.3.2D; Appendix B
	17.4 (2)	6.3.2D-F; Appendix B
	17.4 (3-5)	Appendix B (Commitment to RG 1.88)
	17.5	Appendix B (Commitment to RG 1.88)
Audits	18A1a	12.1
	18A1b	12.2H (all)
	18A2	12.2A; 12.2G.2
	18A3	12.1; 12.2B
	18A4	12.2G.2
	18B1	12.1; 12.2B
	18B2	12.2C
	18B3	Appendix B

MATRIX OF NRC STANDARD REVIEW PLAN PART II, ACCEPTANCE CRITERIA, DESIGN AND CONSTRUCTION (REV. 2, JULY 1981) TO TVA NQA PLAN

SRP SECTION TITLE	RQMT. NO.	TVA NQA PLAN RQMT. NO.	
ACCEPTANCE CRITERIA, PART II			
OPERATIONS			
Organization	1b.	P&OM, Chap. 13 of FSAR	
	1e.	4.1.9G.3; FSAR, Chap. 13	
Quality Assurance Program	2.	Not required - TVA has one QA program	
Design Control	2.	7.2.1C	
Procurement Document Control	----	------	
Inspections, Procedures, and Drawings	----	------	
Document Control	2.a & b	6.1.2B.3	
Control of Purchased Material, Equipment, and Services	----	------	
Identification and Control of Materials, Parts, & Components	----	------	
Control of Special Processes	----	------	
Inspection	2.a & b	Applicable for those individuals performing inspections per section 9.1.2C	Q-47
Test Control	----	------	
Control of M&TE	----	------	
Handling, Storage, and Shipping	2.	9.6.2D.1	
Inspection, Test, and Operating Status	----	------	
Nonconforming Material, Parts, and Components	----	------	
Corrective Action	----	------	
Quality Assurance Records	2.	6.3.2B,C	
Audits	2.	Not applicable. Onsite organization reports to offsite.	

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Reference: Letter from Suzanne C. Black (NRC) to Oliver D. Kingsley, Jr. (TVA) dated July 10, 1989

NRC Request for Additional Information (RAI)	Disposition
Paragraph 2 of NRC cover letter: In revision 6 of the corporate Nuclear Performance Plan (NPP) and in the meeting of June 9, 1989, TVA discussed the dissolution of Engineering Assurance (EA). The EA quality assurance functions are being incorporated into the Nuclear Quality Assurance (NQA) organization. Because this is not discussed in the NQA Plan, you are also requested to address this in your response to the enclosed request for additional information (RAI).	The NQA Plan text has been revised to address the integration of Engineering Assurance functions into other TVA organizations. Refer to the response for RAI number 6.
1. The last sentence in section 5.0 states: "Non-NP TVA organization QA programs shall be reviewed and approved by NQA or NE-EA." Clarify how these reviews are divided between NQA and NE-EA. Also clarify the responsibilities for TVA's contractors and suppliers. (1A2 & 2B1d)	Since the March 30, 1989, submittal of the NQA Plan, the Nuclear Engineering-(NE) Engineering Assurance (EA) organization has been merged into NQA (refer to the response to RAI number 6). Section 5.0 has been revised assigning the responsibility for reviewing and approving non-Nuclear Power TVA organization QA programs to NQA. Also section 4.1.9.G.2e has been revised to clarify that NQA is responsible for reviewing and accepting TVA contractors' and suppliers' QA programs with the exception of those for nuclear fuels and fuel-related components which are reviewed and accepted by NTD (refer to section 8.2.3).
2. The first sentence in section 3.1 states: "The management policies and requirements for the NQA Plan are established by the Senior Vice President," and we note the same policy statement in front of the NQA plan. Clarify whether there are other TVA management QA policies and requirements for the NQA Plan and, if so, what and where they are. (1A3a & 2A2)	There are two TVA QA policy documents; the one in the front of the NQA Plan and a second one in the front of TVA's ASME Section III QA manual, the Nuclear Components Manual (NCM). NQA requirements are promulgated presently in the Nuclear Quality Assurance Manual (NQAM) and interim standards (refer to Appendix A, "Nuclear Quality Assurance Program Implementation Plan." When the plan is accepted by the NRC and the NQAM transition is complete, QA requirements are to be promulgated in a QA directive. The two QA policies and the QA directive are issued under the signature of the Senior Vice President.
3. Assessments in accordance with the second paragraph of section 3.3.3 appear to be self assessments by NQA. Clarify whether the assessments done per this paragraph extend to other NP organizations, to non-NP TVA organizations, and to TVA's NSSS suppliers. (1A3b)	The second paragraph of section 3.3.3 should have applied to NP organizations however, since this paragraph is redundant to paragraph 4.1.2B, it has been deleted. The first paragraph of section 3.3.3 has been revised to address NSSS suppliers and non-NP TVA organizations. The revision to the third paragraph in section 3.3.3 is addressed in the response for RAI number 18.

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NRC Request for Additional Information (RAI)	Disposition
4. The last sentence in the first paragraph of section 5.0 states: "The Vice President, NE shall develop and maintain a fuel program that is consistent with requirements of the NQA Plan." Clarify whether this responsibility holds for the TVA-NSSS supplier interface during the construction phases, or what TVA organization is responsible for this interface. (1A4)	The fuel program addresses interface with suppliers. The text in section 5.0 has been revised to clarify the interface and the responsible organization.
5. Describe the criteria for determining the size of the NQA organization and/or indicate the approximate QA staff size for a one-, two-, and three-operating unit site. (1A5)	The size of the NQA organization, including the size of the respective site QA staffs, is determined by assessing the resources required to adequately perform functions and workload assigned to each NQA organizational unit. This criteria has been added to section 4.0, first paragraph of the NQA Plan. NQA's organizational size is comparable to QA organizations of other nuclear utilities which run four-to six-percent of the total nuclear power organization.
6. Section 4.1.9G.5, 10.3E, and others of the plan describe responsibilities for EA. With the quality assurance functions of the EA organization being absorbed into the QA organization, describe how these responsibilities will be met. (1A6)	The NQA Plan text has been revised to address the integration of EA functions into other TVA organizations. The attached matrix (pages 30 and 31) of this enclosure) shows the EA functions as defined in the corporate Nuclear Performance Plan (NPP) Volume 1, Revision 6 and sections of the NQA Plan dated March 30, 1989, to the sections in the NQA Plan being submitted that address those functions. This response also applies to RAI number 49 and paragraph 2 of NRC cover letter dated July 10, 1989. It should also be noted that the responsibility for review for generic implications of Nuclear Engineering (NE) prepared conditions adverse to quality (CAQs) has been changed from NQA to Nuclear Technical Director (NTD) since submittal of NPP Volume 1, Revision 6.

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NRC Request for Additional Information (RAI)	Disposition
7. Describe NQA involvement in the review and approval of manuals, procedures, and instructions developed and used by other organizations to implement the NQA Plan. (1B1c & 2B1b)	NQA's involvement in the review and approval of manuals, procedures, and instructions is specified in sections 4.1.9.G.2.e and 4.1.9.G.3.d. TVA has indicated in NPP, Vol. I, Revision 6, Section VI, paragraph C.1.b, that NQA approves or concurs with corporate-level documents (directives and standards) and reviews quality related lower-tier procedures that implement the QA program. Section 6.1.3B has been revised to clarify NQA's involvement in review and concurrence with quality-related procedures.
8. Clarify whether verification of conformance is accomplished by personnel within the NQA organization or by personnel outside the QA organization who are trained and qualified in QA concepts and practices. As part of TVA's new "performance-based graded approach" to QA, clarify that safety-related activities, hardware, and software will be subject to the requirements of 10 CFR 50 Appendix B in an ungraded fashion or provide more auditable information as to how the QA program will be graded for safety-related items. For example, while we agree with the concept that product quality be provided and documented through line accountability, it is not clear whether the line organizations or the NQA organization will be responsible for the verification of product quality. Clarify. (1B2)	Inspections will be performed by qualified personnel within the NQA organization or qualified personnel approved by NQA. When the graded approach is applied to an inspection activity, an independent verification of the activity will be required. (Refer to RAI-16.B[3].) Line organizations will provide verification of activities where inspections are not required but where verification of conformance provides meaningful results. Verification of the quality of safety-related activities, hardware, and software by NQA is and will continue to be subject to the 10 CFR 50 Appendix B program. The "performance-based graded approach" being implemented by TVA allows for a grading of verification activities through inspection, surveillance, and/or monitoring as described in section 5.2 of the NQA Plan. It does not allow for the total elimination of verification activities by NQA.
9. Section 10.2.6 addresses stopping work, and parts B and C of Section 10.2.6 imply that work proceeding in violation of approved and controlling documents will not be stopped unless the extent and impact of continued work (part B) will require extensive rework or repair to backfit corrective action or (part C) may jeopardize nuclear safety. Clarify that work proceeding in violation of approved and controlling documents will be stopped even if the restrictive portions of parts B and C of section 10.2.6 do not apply. (1B4b)	Section 10.2.6 has been revised to clarify the requirements for stop work.

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NRC Request for Additional Information (RAI)	Disposition
10. The NQA Plan - Standard Review Plan (SRP) matrix refers to section 10.2.6F of the NQA Plan in response to SRP item 1B4b. Correct this reference since the plan does not have a section so numbered. (1B4b)	The 10.2.6F reference was incorrect and the SRP matrix has been corrected.
11. When describing the personnel requirements for the Manager, NQA (page 16) and for the site quality managers (SQM) (page 18) the NQA Plan specifies a technical bachelor's degree or equivalent related experience." Clarify what is meant by "equivalent related experience." Also clarify that the SQMs are required to have at least one year of experience in the QA organization of a nuclear power plant at the time of initial core loading or assignment to the active position as specified in section 4.4.9 of ANSI/ANS-3.1-1978.) (1C2)	Nuclear Power's education equivalency evaluation methodology is consistent with the ANSI 3.1-1987 Standard, section 4.1.1. As specified in section 4.4.9 of ANSI 3.1-1978, site quality managers are required to have at least one year of experience in the QA organization of a nuclear power plant at the time of initial core loading or assignment to the active position. Section 4.1.9.G.3 has been revised to clarify site quality manager's qualifications.
12. Clarify whether the organization chart for the site quality (page 3 of Appendix H) and the responsibilities of the site quality manager (page 17) are applicable to plants under construction as well as to operating plants. For deferred plants, provide a commitment in the NQA Plan that changes to the QA program described in the July 29, 1988 letter referenced in Appendix F of the plan will be reported to the NRC in accordance with 10 CFR 50.55(f)(3). (1C3 & 2B2)	The organization chart for the site quality (page 3, Appendix H) and the responsibilities of the site quality manager are applicable to plants under construction as well as to operating plants. The deferred plant QA program, by its inclusion in the NQA Plan, requires changes to be submitted to NRC in compliance with 10 CFR 50.54 and 50.55. Refer to Section 5.5 "Program Changes."
13. For each plant, specify in the NQA Plan where the safety-related structures, systems, components, and related consumables are identified in the Safety Analysis Report (SAR).	In section 17.1.2.2 of RG 1.70, it states that the PSAR <u>should</u> identify the safety-related structures, systems, and components to be controlled by the QA program. TVA interprets this statement to not be a requirement. However, for each plant, it is mentioned that a list of such items exists. For SQN this list is known as the critical structures, systems, and components (CSSC) list, and this list is contained within chapter 17 of the FSAR. For BFN, FSAR, Appendix D.3.2 references such a list. This list is contained in the Site Director's Standard Practice (SDSP) 3.12 with instructions for use in SDSP 3.10. For WBN, a list of safety-related structures, systems, components, and related consumables is referenced in the FSAR section 17.2.1. The actual list is drawing 91 QL series. For BLN, the list of such items appears in the FSAR as Table 260.1-1 and is known as the CSSC list. Section 5.1.C identifies that TVA is transitioning from the CSSC list to a Q list.

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NRC Request for Additional Information (RAI)	Disposition
14. Item 3 of Appendix E of the NQA Plan has the limiting expression "without further verification" regarding whether or not computer software that is used to directly interface with control room personnel is treatd as safety-related. Describe measures which ensure that data from the computer are verified prior to making the type of decision indicated in Item 3. (2A1c) Clarification - The real concern is how TVA control room operators know which software has been fully qualified as meeting section 13.0 of the plan requirements (and can therefore be used without further verification) and which has not been fully qualified and must be verified by referral to "compliance instrumentation" before making decisions of the type listed in Appendix E , paragrah 3 of the NQA Plan.	Computer software providing output available to control room personnel which could be used as described in item 3 of Appendix E of the NQA Plan is required to meet QA software requirements described in section 13.0 of the NQA Plan. Those requirements as implemented by corporate and site procedures include testing to ensure correct output data. The status of implementation of section 13.0 requirements varies from site to site as follows: SQN - SQN operators are trained from the outset to use only post accident monitoring (PAM) qualified instrumentation for making diagnostic decisions of the type which could affect the criteria of item 3 of Appendix E. They are trained that the SPDS/TSC computer is to be used as a tool and no action is to be taken based on this system without further verification. Sequoyah is currently in compliance with the requirements of the TVA NQA Plan. A review was conducted prior to restart of unit 2 in 1988 to identify computer software which is used in a manner such that it falls within the scope of the NQA Plan, item 3 Appendix E. The software programs are programmatically controlled and meet the requirements of the NQA Plan section 13. They also are used on the PRODAC 250 Process Computer. When PRODAC 250 Process Computer points are used as compliance instruments, they are controlled through the use of plant procedures. The responsibility for ensuring that computer information used in a manner such that it falls within the scope of the NQA Plan meets applicable requirements rests with the owenrship of the appropriate procedures. Through the use of these programmatic controls, the control room personnel are not required to know which information from the PRODAC 250 Process Comuter needs further verification and which does not. BFN - During normal and abnormal operation, the use of computer information which could be utilized by control room personnel without further verification is controlled through the use of procedures which specify specific computer points to be utilized. When the procedure calls for using a computer point which meets the requirements of item 3 of Appendix E of the NQA Plan, the procedure owner ensures that the associated computer software utilized to provide that computer point meets section 13.0 requirements.

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NRC Request for Additional Information (RAI)	Disposition
	Browns Ferry operators will receive training by years end that they are to verify computer information, obtained without use of a procedure, if they use it to make decisions which could impact the criteria of item 3 of Appendix E. WBN - Watts Bar presently has no fuel loaded in the reactor vessels. By fuel load, Watts Bar will determine which computer software systems will directly interface with control room personnel and can be used by them without further verification to make decisions affecting the criteria in item 3 of Appendix E of the NQA Plan. Those computer systems will meet section 13 .0 requirements of the NQA Plan. Operators will be informed as to what computer information can be used without further verification. Text changes have been made in section 13.0 to further enhance the program.
15. Clarify that "Protective Services" (Item 4.1.8B.4.b in the NQA Plan) includes fire protection. Also, address TVA's commitment to meet the QA guidance for fire protection given in NUREG-0800, Section 9.5.1, Branch Technical Position CMEB 9.5-1 which is referenced on page 82 of the NQA Plan. (2A1d)	Through prior commitments, TVA has implemented 10 CFR 50, Appendix B requirements for portions of the fire protection program as described in each site's Final Safety Analysis Report (FSAR). The scope of the NQA Plan identifies the fire protection program as a quality-related program and requires the development of program procedures which describe the extent to which requirements apply, applicable quality assurance elements, and the levels of verification required. TVA's fire protection corporate management has established a new Nuclear Procedures System (NPS) document (directive), which requires compliance with the "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls, and Quality Assurance (FRACAQ)" guidelines. This directive meets the guidelines of BTP CMEB 9.5-1 and Appendix A to BTP APCSB 9.5-1 and has been approved by the Senior Vice President, Nuclear Power, and is planned for issue for use when the 10 CFR 50.59 evaluations have been performed. Until such time, TVA will continue to meet its present commitments.
16. Update the "Regulatory Guide Conformance Status" (Appendix B of the NQA Plan) to address the latest revision of the following Regulatory Guides (RG) as noted below. (2B3)	TVA will meet the requirements of Regulatory Guide 1.8, Rev. 2 (4/87) for all new personnel qualifying on positions identified in Regulatory Position C.1 after January 1, 1990. Personnel qualified on these positions prior to this date will still meet the requirements of Regulatory Guide 1.8, Rev. 1-R

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NRC Request for Additional Information (RAI)	Disposition
Reg Guide / Referenced Revision / Latest Revision 1.8 — 1-R 5/77 — 2 4/87 1.28 — 0 6/72 — 3 8/85 Specify whether TVA will continue to meet ANSI Standard N45.2 and its programmatic "daughter standards" or NQA-1 (or both). The following items refer to the alternatives to Regulatory Guides given in Appendix B of the NQA Plan:	(5/77). For all other positions, as specified in C.22, personnel will meet the requirement of ANSI/ANS N18.1-1971. This update will require changes to other licensing documents, e.g., technical specifications and plant specific SARs. TVA will update to Rev. 3 (8/85) of RG 1.28 as shown in the revised text. As permitted in RG 1.28, TVA will continue to meet ANSI/ASME N45.2 and the appropriate ANSI/ASME N45.2 series standards as shown in Appendix B of the NQA Plan. Further evaluation will be required to determine whether TVA will commit to ANSI/ASME NQA-1 in the future.
16.A Regulatory Guide 1.8	
TVA's alternative to section 4.3.2 indicates that there may be occasions where TVA will use a multidiscipline crew to perform a task during the operations phase and that the crew foreman may not have the experience required by the standard in one of the disciplines supervised. Provide examples of what these occasions might be and discuss how quality is verified on these occasions.	Two occasions where TVA may use multidiscipline crews to perform tasks include: (1) modification, maintenance, and testing of motor-operated valves, and (2) maintenance and troubleshooting of air-conditioning system Quality is verified through a combination of task supervision provided by foremen possessing documented cross-discipline training which ensures proper assessment of required work skills and the graded application and verification of quality assurance requirements to quality-related items and activities. If the required training is not complete, lead craftsmen are assigned to assist the foreman in job selection and field decisions.
16.B Regulatory Guide 1.30	
(1) Item 3 indicates that appropriate test will be performed . . . "during the operational phase." Clarify TVA's position in this regard during design and construction.	For TVA plants under design and construction, tests are performed in accordance with applicable design and testing requirements established by NE which include the requirements and acceptance criteria of technical specifications, drawings, specifications, codes, standards, regulatory requirements (including RG 1.30), and scoping documents as applicable. During the operational phase, tests are performed following plant repairs, replacements, maintenance, or modifications as determined by NE, modification, or maintenance engineering, as appropriate, based upon the

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NRC Request for Additional Information (RAI)	Disposition
16.B (continued)	
	equipment or system functions that could be impacted by the work performed. Clarification has been included in the text, Appendix B, RG 1.30, item 3.
(2) Item 5 indicates that TVA interprets section 6.2.2 of the standard to not require an entire system test after modification of only part of the system. Clarify item 5 to indicate what testing will be done by TVA under these circumstances.	Tests are performed on equipment that has or could be impacted by modifications in accordance with applicable design and testing requirements. For major modifications, Nuclear Engineering defines test requirements and acceptance criteria and reviews the test results to ensure that the design requirements are met. Satisfactory completion of required tests is required to prior plant acceptance and closure of modification test package.
(3) Item 6 states that some items traditionally inspected by quality control may be accomplished through independent verification. Clarify how this independent verification is to work and how it is equal to or better than present practice.	Independent verification will be utilized by NQA on items traditionally inspected by qualified NQA personnel or qualified personnel approved by NQA, when the "graded approach" has been applied to an activity. If NQA decides to grade an inspection, the line must provide a documented, independent verification of the quality of work performed. The justfication for grading the inspection of a line activity will be documented by NQA. The combination of an independent verification with a "graded approach" justification provides a program whereby line accountability for quality is emphasized and NQA resources can be better utilized to perform meaningful inspections.
16.C Regulatory Guide 1.33	
(1) Item 4 refers to section 4.3.1.B.6.c of the NQA Plan which appears to have been deleted and renumbered. Clarify.	The section referenced in item 4 has been corrected to 6.1.2.F3.
(2) Item 5 states that TVA treats significant deviations different from other deviations. Indicate who (by position title) specifies the category of each deviation.	Presently the Nuclear Quality Assurance Manual (NQAM), Part I, Section 2.16, "Corrective Action," defines "significant CAQs" as those CAQs that are documented on a condition adverse to quality report (CAQR) that are determined to be a QA programmatic deficiency and/or reportable to the NRC. NQAM, Part I, Section 2.16 is being transitioned into an NPS document (Standard 3.3.1). (This response also applies to RAI number 43.)

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NRC Request for Additional Information (RAI)	Disposition
16.C (continued)	
	Nuclear Quality Assurance (NQA) Manager or Site Quality Manager or their designee is responsible for review of the CAQRs to determine if they document a QA programmatic deficiency. Presently the organizations designated to perform are as follows: Quality Assurance Department (NQA Chattanooga) - All corporate organizations (that is, Knoxville, Chattanooga, and Muscle Shoals). Sequoyah - Site QA Technical Support organization. Browns Ferry - Quality Surveillance organization performs the review for all site Nuclear Engineering related CAQRs and Quality Assurance organization for all others. Watts Bar - Quality Engineering performs review for all site Nuclear Engineering related CAQRs and Technical Support organization for all others. The responsibility for determination of reportability for Watts Bar and Bellefonte is Watts Bar Site Licensing Manager. for Sequoyah it is plant Technical Support manager, for Browns Ferry it is the Plant Support manager, and for Nuclear Power corporate offices it is the manager of Nuclear Licensing and Regulatory Affairs in Chattanooga.
16.C Regulatory Guide 1.33 (continued)	
(3) Item 6 indicates that some activities listed as safety related in Appendix A of the guide may not be classified as safety related or nuclear safety related in the TVA NQA Plan. Specify which activities in Appendix A are in this category.	The purpose of item 6 was to identify a distinction between the term "safety related" as used in RG 1.33 and the terms "nuclear safety related" and "quality related" as used in the NQA Plan. TVA considers all the items identified in Appendix A of RG 1.33 to be safety related and intends to comply with the RG in this regard. Therefore, item 6 under RG 1.33 in NQA Plan Appendix B dated 3/30/89 has been <u>deleted</u> and the items renumbered.

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NRC Request for Additional Information (RAI)	Disposition
16.C (continued)	
(4) Item 7 states that TVA's alternative to regulatory position C.4 is to comply with the audit requirements of the technical specifications. Since section 4.5 of the standard discusses the audit program, and since regulatory position C.4 does not address section 4.5 of the standard, clarify this item. NOTE: This question was revised and clarified as follows per a July 18, 1989 telecon between Jack Spraul, NRC, and Les Ginn, TVA Licensing. Clarify what portions of Regulatory Guide 1.33, section C.4 will not be met and what technical specification audit requirements will provide an equivalent level of quality/quality assurance..	The Sequoyah and Browns Ferry technical specifications audit sections are consistent with RG 1.33 dated February 1978, section C.4 and ANSI N18..7-1976 section 4.5. However, TVA plans to submit a proposed change to both technical specifications in response to NRC question 16M which will allow some flexibility in the implementation of the audit program.
16.D Regulatory Guide 1.37	
(1) Item 3 indicates that TVA will allow temporary ink markings placed by the fabricator as mill marks to remain on components that operate at temperatures greater than 200°. If ink markings contain sulfur, lead, zinc, mercury, or other low melting alloys, they are not allowed on austenitic stainless steel or nickel-based alloys per RG 1.37 and ANSI N45.2.1-1973. Such markings should be removed with a solvent. Justify TVA's position on this alternative.	Item 3 describes that temporary ink markings (mill marks) may remain on components operating at temperatures great than 200°F <u>and</u> which have a 40-year integrated radiation dose of less than 10^6 rads. This position is based on significant TVA testing and evaluation and on revised cleanliness requirements provided by Westinghouse (for SQN and WBN). It should be noted that surface cleanness testing is also a requirement (i.e., swipe testing to an acceptance level of 0.08 mg/dm^2 residual chloride and fluoride is still required), and markings that are allowed to remain include only ink-type markings, not paint-type markings. It should also be noted that subsequent TVA evaluation has decreased the 200°F temperature limit back to the originally accepted limit of 140°F. The test has been revised in Appendix B under RG 1.37 to reflect this change and to correct 10^6. Therefore, TVA meets the requirements of Reg. Guide 1.37.

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NRC Request for Additional Information (RAI)	Disposition
16.D Regulatory Guide 1.37 (continued)	
(2) Item 4 proposes that TVA will reduce the controls on abrasive tools which may contain corrosive material. This proposal does not meet the intent of RG 1.37, regulatory position C.5 and needs to be justified.	Item 4 allows the purchase of grinding wheels/flappers, etc., without mandatory controls for halogen, sulfur, and low-melting metal contents. This position is based on extensive TVA testing to characterize residual abrasives deposited after grinding/cutting. This testing effort determined that residual abrasives were manifested such that residuals were removable by post-grinding cleaning. Also, the NQA Plan requires removal of particulate (vacuum, brush, etc.) followed by cleaning with an approved solvent when abrasive tools are used on corrosion-resistant alloys.
(3) Item 5 proposes that "temporary tape and markings (ink and paint may remain on components that operate at temperatures less than 200°F. This proposal is not in accordance with RG 1.37 and ANSI N45.2.1-1973 and needs to be justified.	Item 5 allows temporary markings (ink and paint) and tapes to remain on components that operate at temperatures less than 200°F. This position was based on significant TVA testing and evaluation, and on revised cleanness requirements provided by Westinghouse (for Sequoyah and Watts Bar). Note that the temperature limit, which was established through testing primarily utilizing the modified dana wicking test to show that tape and markings allowed to remain on piping would not precipitate cracking for limited operating temperatures (normal or accident conditions), has been decreased to the previous limit of 140°F based on further evaluation of the results of testing. The text has been revised in Appendix B to reflect the 140°F temperature limit.

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NRC Request for Additional Information (RAI)	Disposition
16.D Regulatory Guide 1.37 (continued)	
(4) Item 7 proposes that TVA intends to conform to the cleanness requirements of section 3.1 of ANSI N45.2.1-1973 with the exception of permissible particle sizes for cleanness classes B and D. In these cases, TVA intends to conform to the requirements of ANSI N45.2.1-1980, section 3.2.2.1(b). TVA is requested to justify this exception. TVA's justification should address the relationship of this exception to the Bellefonte Nuclear Plant exception request, submitted to the NRC dated December 22, 1987, concerning ANSI N45.2.1-1973. This exemption request pertained to flushing particle size for purge dam material (glue and paper) to allow any adherent purge dam material to remain on the pipe walls after flushing.	Item 7 describes an exception to ANSI N45.2.1-1973 permissible particle size requirements for cleanness Classes B and D. TVA does not view the particle size difference between ANSI N45.2.1, 1973 and 1980 versions, as significant. For Class B cleanness, the 1973 requirements state "There shall be no particles larger than 1/32-inch in any dimension, except fine hairline slivers of less than 1/32-inch thickness are permissible up to 1/16-inch long." The term "fine hairline slivers" is subject to interpretation and therefore, TVA has opted for the 1980 requirements which state "There shall be no particles larger than 1/32-inch by 1/16-inch." This statement leaves no room for interpretation. A similar statement exists for cleanness Class D. This change in particle size requirements is not related to the purge dam related request submitted for Bellefonte. The Bellefonte request is a plant-specific exception with significant supporting testing and evaluation. TVA views the Bellefonte request as a separate issue, and is still waiting for an NRC response.
16E. Regulatory Guide 1.38	
(1) Section 3.5.1 of N45.2.2 states: "Caps and plugs shall be used . . . to protect threads and weld end preparations." In light of this requirement, justify TVA's position in item 4 that end caps are not mandatory on tube or pipe fittings if they are protected from the elements.	Item 4 allows pipe and tube fittings to be stored without end caps, provided that fittings are under cover and protected from the elements. The protection of threads and weld ends afforded by end caps are basically in two areas, physical protection (against bumping or banging, dents, scrapes, etc.) and cleanness protection (against introduction of corrosive agents or dust/dirt). In both cases, pipe and tube fittings are comparatively easy to clean or refurbish (compared to a lengthy section of

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16.E.(1) (continued)	
	pipe or tube), hence the distinction between pipe/tube and fittings. With the under cover and protection from the elements requirement, corrosive agents will be basically eliminated and physical degradation will be kept to a minimum. Additionally, components are required to be in a visually clean condition and be free of visually detectable defects prior to installation; and once installed, internal cleanness and function are ensured through flushing (soluble contaminants within acceptable limits) and functional tests (hydrostatic testing, leak testing, pump or valve operation, etc.).
(2) Item 5 indicates TVA will meet the standard's requirements for inspections and examinations of stored items by periodic inspection of randomly selected items. Provide more detail regarding how the periodicity is determined and how the samples are selected.	Criteria and factors regarding frequency and degree of QA verification are described in the NQA Plan section 5.2 A and B. Appendix B item 5 for RG 1.38 has been revised to reference those sections of NQA Plan.
(3) Clarify whether the inspections per section 5.2.2 of the standard as discussed in items 5 and 6 are done by NQA personnel.	Clarification is stated in section 9.0, subparagraph 9.1.2C which states, "Inspections shall be performed by NQA, or other qualified individuals approved by NQA . . . . "
(4) Items 7 and 8 take exception to the standard's requirements that manufacturer's instructions be followed for maintenance of stored hardware and hardware released from storage. The alternative is to provide an engineering evaluation or engineering requirements document delineating appropriate maintenance requirements. Describe measures which ensure that vendor recommendation/requirements will be considered by the responsible engineer.	If TVA decides to deviate from the vendor's recommendation, the appropriate maintenance requirements are determined by the responsible engineer as provided by the clarification provided in TVA's February 17, 1989 letter to the NRC. Vendor recommendations are required to be considered as a source in the preparation of the engineering evaluation. The text in section 9.6.2.B2 and Appendix B alternatives 7 and 8 to RG 1.38 have been revised for clarification.

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16F. Regulatory Guide 1.54	
In accordance with the Standard Review Plan (NUREG-0800) delete the commitment and alternatives to this guide from the NQA Plan. The commitment and alternatives to this guide should be in the SAR for each site. Correspondingly, delete item N on page 28, item J on page 45, item H on page 47, item L on page 51, item E on page 55, item J on page 63, and item J on page 65.	The commitment to RG 1.54 and ANSI 101.4, and alternatives, have been deleted from Appendix B of the plan and the other references indicated. In addition, sections 9.1.4, 9.3.4. and 9.6.4 have been corrected to delete the reference to protective coatings.
16G. Regulatory Guide 1.58	
Justify the deletion of the commitment that "on-the-job" participation in the work discipline is required for all candidates.	The commitment was inadvertently left off and has been included in the revised text to item 2 under RG 1.58.
16H. Regulatory Guide 1.74	
Clarify what exceptions are taken to this guide "in section 6."	The definitions in section 15, which are acceptable alternatives to RG 1.74, have been identified with an asterisk in the section. Also, the referenced section (6) has been changed to "section 15" (15.0, DEFINITIONS).
16I. Regulatory Guide 1.88	
As noted in Appendix B of the NQA Plan, the NRC has not endorsed the 1979 version of ANSI N45-2.9. Therefore, provide TVA alternatives to the 1974 version which is endorsed by the guide instead of the 1979 version. Correspondingly, revise items J and K on page 28.	TVA has revised the commitment to the 1974 version of ANSI N45-2.9 with TVA alternatives noted in Appendix B of the NQA Plan. These alternatives are a consolidation of the alternatives to RG 1.88 listed in tables 17D-1 and 17D-2 of TVA's Topical Report (TVA-TR75-1A), Revision 10 previously accepted by NRC. Section 6.1.4.J text has been revised.
16J. Regulatory Guide 1.94	
(1) Justify the use of "would" in alternative 8.	The word "would" is a carry over from the approved QA Topical Report TVA-TR75-1, R10. For clarification it has been changed to "shall."

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16J. Regulatory Guide 1.94 (continued)	
(2) Clarify that when engineering personnel establish the need for specific tests during the operations phase, the guidance provided in N45.2.5 is considered for applicability.	During the operations phase when engineering personnel establish the need for specific tests to be performed following plant repairs, replacements, maintenance, or modifications, the guidance provided in ANSI N45.2.5-1974 is considered for applicability. Item 10 under RG 1.94 has been revised.
(3) Alternative 11 states: "Some items traditionally inspected by quality control may be accomplished through independent verification." Clarify how this independent verification is to work and how it is equal to or better than present practice.	Refer to response to RAI number 16.B (RG 1.30, item 6). The text was revised to add quality monitoring.
16K. Regulatory Guide 1.116 - ANSI N45.2.8-1975	
(1) Clarify that when engineering personnel establish the need for specific tests during the operations phase, the guidance provided in N45.2.8 is considered for applicability.	During the operations phase, when engineering personnel establish the need for specific tests to be performed following plant repairs, replacements, maintenance, or modifications, the guidance provided in ANSI N45.2.8-1975 is considered for applicability.
(2) Alternative 3 states: "Some items traditionally inspected by quality control may be accomplished through independent verification." Clarify how this independent verification is to work and how it is equal to or better than present practice.	Refer to response to RAI number 16B (RG 1.30, item 6).
16L. Regulatory Guide 1.123	
The alternative states: "The procurement documents shall contain requirements specific to the (commercial grade) item being procured." Clarify what this means.	The procurement document specifies acceptance requirements (special receipt inspection requirements, special tests, or functional tests) specific to the item being procured. The acceptance (dedication) of commercial grade items meets the intent of EPRI NP-5652 as accepted by NRC. The alternative text has been revised for clarification.

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16M. Regulatory Guide 1.44 Regarding alternative 2, clarify what is meant by "real time adjustments" to audit scope, depth, and frequency. RG 1.33 (referenced in section C.3.a of RG 1.144) and section 6 of Technical Specifications both stipulate audit frequencies. Clarify whether TVA will meet these stipulated audit frequencies through the use of performance-based audits rather than programmatic reviews.	TVA meets the audit frequencies stipulated in section 6.0 of the technical specification . TVA plans to obtain audit frequency relaxation through the technical specification change process by submittal of a technical specification change. The basis for relaxation is the increased use by TVA of performance-based audits. TVA's approach to performance-based audits includes a review of performance history (i.e., current trends, past problems, past reviews, and evaluations). TVA desires the relaxation of audit frequencies (i.e., 25 percent) to allow focusing of audit verification efforts in problem areas. In addition, real time adjustments of audit scope and depth are needed to emphasize auditing of areas where performance is weak and to decrease emphasis where performance is evaluated to be good.
17. Identify the procedures that TVA uses to meet the quality assurance Regulatory Guides, General Design Criterion (GDC) 1, 10 CFR 21, and Appendix B to 10 CFR 50.	Corporate-level procedures that TVA uses to meet the quality assurance Regulatory Guides, GDC 1, 10 CFR 21, and Appendix B to 10 CFR 50 are identified in the Nuclear Regulatory Commission (NRC) accepted TVA Topical Report (TVA-TR75-1A) Revision 10. As mentioned in the Nuclear Quality Assurance (NQA) Plan, Appendix A, "Nuclear Quality Assurance Program Implementation Plan" and as described in revision 6 to the corporate Nuclear Performance Plan (submitted to NRC May 5, 1989), the existing quality assurance procedures, including the NQA Manual, are being transitioned and integrated into Nuclear Procedures System (NPS) documents. Existing quality assurance procedures are maintained in effect until superseded by new NPS documents. This transition ensures that the regulatory quality requirements are maintained. Sponsors of new NPS documents are required by a Nuclear Power Directive (DIR-4.4, revision 2), to identify the document as "quality-related" if it contains quality assurance program requirements. The "quality-related" determination is made from a listing of source requirement document references contained in the NQA Plan. The NQA Plan establishes the quality assurance program requirements. The NQA Plan places responsibilities on

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17. (continued)	identified sponsors to develop specific elements of the quality assurance program addressing specific requirements of source requirement documents. (For an example, refer to section 6.3.3. NPS documents prepared by the Vice President, Nuclear Assurance and Services for quality assurance records control are identified as "quality-related" in accordance with the Nuclear Power directive mentioned above, and contained specific quality assurance records requirements as identified in the source requirement documents.) Corporate Directives and Standards identified as quality-related receive NQA review and concurrence (as described in revision 6 to the corporate Nuclear Performance Plan). This same concurrence is required to cancel existing procedures being superseded by new Directives and Standards. These concurrences ensure that new Directives and Standards address quality assurance requirements before the existing procedures are superseded. The NQA Plan satisfies the requirements of General Design Criterion 1 for a quality assurance program. Enclosure 3 to TVA's March 30, 1989 transmittal of the plan "Comparison of NQA Plan Requirements With Those of 10 CFR 50 Appendix B and Selected ANSI Standards" has been updated and is included as an appendix to the NQA Plan.
18. Section 3.3.3 and 4.1.9D of the NQA Plan refer to "appropriate" management. Clarify who this includes (by position title). Also, section 3.3.3 states that NQA shall arrange for an annual assessment of its performance. Clarify how a conflict of interest is avoided with this arrangement. (2C1)	The appropriate levels of management for sections 3.3.3 and 4.1.9D include the Senior Vice President, Nuclear Power, and affected vice presidents and site directors. Sections 3.3.3 and 4.1.9D have been revised to reflect the appropriate level of management. The third paragraph of section 3.3.3 has been corrected to read "NQA shall arrange for an annual assessment of Nuclear Quality Audit and Evaluation's (NQA&E) performance by an organization external to NQA." A conflict of interest is avoided by NQA management, not NQA&E, arranging for the annual assessment by an organization external to NQA.

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19.	Sections 11.2.1A and 11.2.1C of the NQA Plan limit the commitments to the operations phase and to ASME Section III activities, respectively. Justify these limitations. (2D)	Section 11.2.1A should have read "personnel performing quality-related activities . . ." Section 11.2.1A has been revised not to limit the commitments only to the operational phase and to ASME Section III activities.
20.	Section 7.2.4 of the NQA Plan addresses interface design controls. Clarify that these controls ensure that critical structures, systems, and components (CSSC) are compatible geometrically, functionally, and with plant processes and environment. (3D)	Section 7.2.4 of the NQA Plan has been revised to clarify this point.
21.	Describe measures which ensure that documented checks (as by a "Drawing Checker") verify the dimensional accuracy and completeness of design drawings and specifications. (3E1)	Assurance that documented checks verify the dimensional accuracy and completeness of design drawings and specifications is an inherent part of TVA's design review process in meeting the commitment to RG 1.64. Section 6.3 of ANSI N45.2.11-1974 states that design reviews are critical reviews to provide assurance that design documents such as drawings, calculations, analysis or specifications are correct and satisfactory. Requirements for these reviews are included in a Nuclear Engineering Procedure (presently NEP 5.2). These responsibilities are described in sections 7.2.5, 7.2.6, and 7.2.7 of the plan.
22.	Describe measures which ensure that design drawings and specifications are reviewed by NQA to the extent necessary to assure that they were prepared, reviewed, and approved in accordance with TVA procedures and that they contain the necessary QA provisions. (3E2)	Design drawings and specifications are prepared, reviewed and approved in accordance with Nuclear Engineering procedures. These procedures contain requirements that ensure that Engineering considers appropriate QA provisions in the preparation of these documents and that they are reviewed by technically qualified reviewers and affected organizations as applicable. NQA utilizes audits, monitoring, and surveillances to assure that the documents contain the necessary QA requirements such as inspection and test requirements, acceptance requirements, and the extent of documenting inspection and test results. The NQA Plan requires an audit program which ensures through periodic assessments performed in accordance with ANSI N45.2.23, that the programmatic requirements are being implemented as prescribed in TVA procedures and that the engineering products are technically adequate.

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22.	(continued)	Monitoring and surveillance for compliance to procedures and to determine the adequacy of procedures and engineering products is also performed by the NQA. The NQA activities and responsibilities described above are identified in section 4.1.9 of the NQA Plan.
23.	Justify why Appendix G, "Examples of Controlled Documents," of the NQA Plan does not include computer programs, system descriptions, as-built documents, topical reports, the NQA Plan, and nonconformance reports (3E4c and 6A1).	As indicated in section 6.2.2 A 1 of the NQA Plan dated 3/30/89, Appendix G Lists "examples" of controlled documents. This was also indicated in the title of Appendix G ("EXAMPLES OF CONTROLLED DOCUMENTS"). TVA's intent was to reflect only some types of controlled documents and not just limited to the ones listed. Section 6.2.2.A1 and Appendix G heading have been revised to clarify this point. Also the following types of controlled documents have been added to Appendix G: As-built Documents Computer Programs Nonconformance Reports NQA Plan System Descriptions Topical Reports
24.	Section 7.2.6F of the NQA Plan addresses verification tests. Clarify whether prototype, component, and feature tests are performed as early as possible and prior to plant installation of the equipment or at least prior to the point where installation would be virtually irreversible. (3E3b)	The preceding section (7.2.6E) discussed the timeliness of performing design verification, and it is understood that when verification by test is used, the timeliness factor still applies. Section 7.2.6F has been revised to clarify and to address this point.
25.	Section 8.1 of the NQA Plan addresses procurement document control, and it focuses on nuclear power stores. Describe the tie, if any, between TVA's nuclear power stores and non-nuclear power stores and how procurement document control and procurement control are applied when items are obtained from TVA's non-nuclear power stores. (4B1)	There is no direct tie between nuclear power stores and non-nuclear power stores. If items are obtained from TVA's non-nuclear power stores for a safety-related application, the procurement document contains the technical and quality requirements which the item must satisfy for dedication, including the specific acceptance requirements (receipt inspection, special tests, functional tests, documentation). Procurement document control is assumed by nuclear power stores when the items are received.

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26.	Section 6.1.2B.3 of the NQA Plan states that procedures and instructions shall be reviewed to ensure proper implementation of QA. requirements. Clarify who (by position title) is responsible for this review. (5A)	As stated in section 6.1.3.B, the Manager, NQA, ensures through monitoring activities and utilizing graded approach criteria, that procedure reviews are conducted by personnel knowledgeable in QA requirements. These reviews are normally performed by individuals within the NQA organization but when deemed appropriate by the Manager, NQA, may also be performed by other individuals who are knowledgeable of QA requirements. (This response also applies to RAI number 46.)
27.	Sections 6.1.3A and 6.2.3 of the NQA Plan each refer to "paragraph B of this section" and "paragraph D of this section." It appears that these references should be section 6.1.2 and 6.1.4 in section 6.1.3A and to sections 6.2.2 and 6.2.4 in section 6.2.3. Clarify. Also check sections 9.1.3B and 9.7.3A. (5A)	The references have been corrected.
28.	Section 6.1.2F.1 of the NQA Plan indicates that changes to instructions and procedures will generally be reviewed and approved by "the same organizations that performed the original review and approval." Section 7.2.7B indicates that design changes will generally be reviewed and approved by "the organization responsible for the original design." Justify the differences between section 7.2.7B and section 6.1.2F.1 in this regard. (6A3)	Section 6.1.2F.1 is discussing the review and approval of changes to procedures and instructions as specified in the Standard Review Plan (SRP) section 6A3. Section 7.2.7B is discussing design output document (drawings & specifications) changes as specified in SRP, section 3F1.
29.	Describe measures which ensure that documents are available at the location where the activity will be performed prior to commencing the activity. (6A4)	The present QA program requires that measures be established to ensure that documents prescribing the activity are made available to personnel prior to commencing work. Section 6.2.1 of the NQA Plan has been revised to address this requirement.
30.	Describe measures which ensure that procurement of spare and replacement parts is subject to current NQAP controls. (7A4)	The QA measures applicable to procurement of materials, components, and services described in section 8.0 of the plan are also applicable to spare and replacement parts.
31.	Describe measures which ensure that the inspection status of items is identified before forwarding them to a controlled storage area and before releasing them for installation or further work. (7B2)	Section 8.2.2.F.4 (Program Elements) has been <u>deleted</u> and replaced with section 8.2.2.G to identify requirements for maintaining inspection status of items received.

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32. Describe criteria for determining processes that are controlled as special processes. (9A1)	Those processes as determined by NE which, by their nature, make a direct inspection either impossible or disadvantageous, are controlled as Special Processes. Special Processes are delineated in quality assurance/quality control procedures which require qualified personnel and qualified written procedures. Special Processes include, but are not limited to, welding, forming/bending, heat treating, chemical cleaning and nondestructive examination. The text in sections 9.3.1 and 9.3.2.A have been revised to address this question.
33. Section 9.1.2C of the NQA Plan indicates that inspections may be performed by non-NQA personnel when "approved by NQA." Clarify that NQA approval ensures that personnel do not report directly to the immediate supervisors who are responsible for the activity being inspected. Also, clarify that the inspection procedure, the personnel qualification criteria, and the personnel independence from undue cost and schedule pressures are reviewed and accepted by NQA. (10B1)	Clarification NO. 1 Inspections performed by NQA personnel or those approved by NQA, satisfy the requirements of remaining independent of the activities being inspected. Section 9.1.2.C.1 of the plan has been clarified to apply to those individuals approved by NQA and NQA personnel. CLARIFICATION NO. 2 Inspection procedures, personnel qualification criteria and the personnel independence from undue cost and schedule pressures are ensured through the following: Inspection procedures are reviewed and accepted by NQA. Section 6.1.1 of the plan requires that quality-related activities be prescribed by documented procedures and instructions. Section 6.1.2 B.2 requires review and concurrence of procedures and instructions. The requirements for review and concurrence by NQA are specified in section 4.1.9.G.2 for the Quality Programs manager and section 4.1.9.G.3 for the site quality manager. The requirements as referenced ensure NQA review and acceptance of inspection procedures. Personnel qualification criteria is reviewed and accepted by NQA. Sections 9.1.2.C.2 and 11.2.2 of the plan describes requirements relative to inspection personnel qualifications. This includes NQA and non-NQA personnel that perform inspections. Section 9.1.2.C.2 has been clarified concerning NQA review and acceptance.

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33.	(continued)	Sections 9.1.2.C.1 and 3.3.2 of the plan address independence of inspectors. As described, inspections shall be performed by individuals other than those who perform or directly supervise the activity and sufficiently independent from considerations of cost of scheduling pressure.
34.	Describe measures which ensure that inspection plans and instructions identify the applicable revision of the pertinent design output documents. (10C1e)	Inspection procedures, instructions, and checklists do provide for identification of required procedures, drawings and specifications and revisions. Section 6.2.2 of the plan requires inspection plans and instructions to be prepared using controlled copies (latest revision) of pertinent design output documents. Section 7.2.1 requires changes to design output documents to be incorporated into inspection plans and instructions.
35.	Section 9.5.2C.1 of the NQA Plan indicates that calibration of installed instrumentation and control (I&C) devices that provide final measurement data or controls shall be against materials and test equipment (M&TE) that has an accuracy of at least equal to the required accuracy of the device being calibrated. Discuss why better than equal is not required. (12.7)	Existing standards require that instruments, used to conduct measurements or tests, must have adequate accuracy to determine the measured quantity to the limits of the specifications. If the stated limits of the specifications require an accuracy better than equal, TVA complies. It is TVA's general policy to use instruments with an accuracy better than the required accuracy which exceeds the requirements of existing standards. Section 9.5.2.C.1 has been revised to clarify.
36.	Section 9.5.2A.5 of the NQA Plan indicates that methods shall be established to identify previous usage of M&TE or installed I&C devices when found to be out of tolerance. Clarify whether TVA trends calibration data to identify instrument drift (within calibration ranges) that occurs between calibrations to identify instruments which might drift outside their calibration range before the next calibration. (12.9)	It is not TVA policy, nor are we aware of an industry requirement to trend instrument drift on instruments that are found within their calibration limits. However, when an instrument is found to be out-of-calibration an investigation is performed to ensure that the out-of-calibration condition did not affect the results of inspections or tests.

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37. Section 10.2.1B of the NQA Plan indicates that dispositions of accept-as-is and repair shall be independently reviewed and approved. Indicate what organization(s) review, approval, and close-out the accept-as-is and repair dispositions, and show their independence. (15.1)	CAQs denoting an accept-as-is or repair disposition require the following reviews and approvals in addition to the review and approval required by the organization recommending the disposition. A. Nuclear Engineering for those CAQs involving deviations from design engineering specified requirements. B. Nuclear Fuel for those CAQs involving deviations from engineering specified requirements for nuclear fuel or fuel-related components. C. Plant Operation Review Committee and plant manager for those CAQs affecting a unit with an operating license or those CAQs affecting tentatively transferred systems on a unit with a construction permit. D. Site quality assurance organization. Site quality assurance organization is responsible for verifying the implementation of the corrective action and closing out the corrective action document. The site quality organization serves as an independent oversight organization in the review and approval of the corrective action and verification of the corrective action for those CAQs dispositioned as accept-as-is or repair.
38. Describe measures which ensure that CAQs are corrected or resolved prior to the initiation of preoperational testing of the item (15.3)	Preoperational testing has been completed on units with an operating license. Preoperational testing of transferred equipment is essentially complete for WBN unit 1. Retesting of unit 1 equipment will be conducted as part of the Prestart Test Program as described in TVA's WBN Nuclear Performance Plan, Volume IV.

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	An administrative control system has been established at WBN to ensure that CAQs for WBN unit 1 are completed prior to the system completion milestone or evaluated and determined not to impact system testing. This administrative program is implemented in a site director procedure "Administrative Instruction (AI 6.15 - System Completion Verification). It requires that the test director evaluate and document any open CAQs at system completion and provides for a review and approved process for each decision. System testing will not begin until after system completion verification for each system. WBN unit 2 CAQ resolution prior to preoperational testing will be controlled by the equipment transfer process. An AI (AI-6.15) ensures that open CAQs are included as a part of the system punchlist. It also requires that CAQs are either completed prior to transfer and test or evaluated and determined not to adversely impact testing. Bellefonte Nuclear Plant (BLN) units 1 and 2 are currently in a deferred status and are under the deferred plant QA program.
39. Describe measures which ensure that reworked, repaired, and replacement items are inspected and tested in accordance with the original inspection and test requirements, or acceptable alternatives. (15.4)	Section 10.2.1.B has been revised to describe these measures.
40. Section 10.2.2B of the NQA Plan indicates that some minor deficiencies can be "corrected on the spot." Provide examples of deficiencies that lend themselves to this type of control. Describe how TVA will assure that this system is not abused. (15.5)	TVA assures that the "corrected on the spot" process is not abused by procedurally limiting its use to qualified QA organization personnel responsible for conducting audits, inspections, or QA monitoring activities. The QA organization has procedurally defined the "corrected on the spot" process and established criteria for identification and trending of "corrected on the spot" items. Deficiencies identified as "corrected on the spot" items are required to be trended as part of the trending program described in section 10.2.5 of the NQA Plan.

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40. (continued)	Example Of A QA Auditing "Corrected On The Spot" Deficiency While conducting an audit of the nuclear training organization an auditor is directed to verify completion of forms required by a License Operator Training Program Procedure. The auditor randomly selects five licensed operator training records to review. Upon review the auditor discovers one of the forms in an individual's file has a completion date approximately one month beyond the required time limit detailed by the Training Program Procedure. The auditor immediately brings this condition to the appropriate supervisor's attention. The supervisor checks other records and provides the auditor proof that performance actions detailed on the form were completed within required time limits. The supervisor concluded that the completion date had been incorrectly recorded and takes corrective action by appropriately correcting the date and forwarding the form for document retention. This deficiency would be detailed on the auditor's report as a "corrected on the spot" item. Example Of A QC Inspection "Corrected On The Spot" Deficiency A Quality Control inspector is required to conduct an in-process inspection of a cable termination and connection. Based on the graded approach method the only attributes in the inspection plan are preparation , location, and separation. During the inspection the inspector observes that one of the conductors is not connected to the correct terminal point as specified in the work package. Discussion between the craftsman and the inspector conclude that legibility of the termination sheet in the work package was a probable cause for human error. This deficiency is brought to the attention of the cognizant engineer who provides necessary clarification and directs the conductor to be landed at the correct terminal point. The inspector observed that the corrective actions were appropriately taken within an acceptable time limit. This occurrence would be recorded on the inspection report as a "corrected on the spot" item.

TVA RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION
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Reference: Letter from Suzanne C. Black (NRC) to Oliver D. Kingsley, Jr. (TVA) dated July 10, 1989

NRC Request for Additional Information (RAI)	Disposition
40. (continued)	Example Of A QA Monitoring "Corrected On The Spot" Deficiency An item on a QA evaluator's checklist states that the evaluator will observe aspects of hydrostatic testing. Specifically, the evaluator will ensure three separate attributes of the testing activity: (1) ensure that the test director conducts a pretest briefing, (2) ensure test gauges are calibrated, and (3) ensure test pressure is attained. During the test, the evaluator notices that one gauge being used to record data is out of its calibration due date. This is brought to the attention of the test director, the test is secured, and the gauge is replaced with one which is properly calibrated. The attribute of checking calibration of gauges would be recorded on the monitoring report as "corrected on the spot." Details of the occurrence would also be documented on the report.
41. Describe measures which ensure that NQA reviews and documents concurrence with corrective action procedures. Also clarify whether a CAQ is a form as well as the abbreviation for condition adverse to quality. If not, clarify that CAQs are documented.	Nuclear Power procedures that describe the preparation, review, approval, and maintenance of procedures and instructions affecting quality contains the requirements that these procedures receive a documented review and approval by NQA. This includes those procedures describing the corrective action program. "CAQ" is not a form but rather a term used to mean adverse conditions including nonconforming material, parts, or components; failures; malfunctions; deficiencies; deviations; hardware problems involving noncompliance with licensing commitments, specifications, or drawing requirements; abnormal occurrences; and nonhardware problems such as failure to comply with the operating license, technical specifications, licensing commitments, procedures, instructions, or regulations.

TVA RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION
NUCLEAR QUALITY ASSURANCE PLAN
9/1/89

Reference: Letter from Suzanne C. Black (NRC) to Oliver D. Kingsley, Jr. (TVA) dated July 10, 1989

	NRC Request for Additional Information (RAI)	Disposition
42.	Describe NQA's involvement in the concurrence of the adequacy of formal corrective action, in the verification of proper implementation of corrective action, and in the closeout of corrective action (16.2 and 16.3)	Presently the Nuclear Quality Assurance Manual (NQAM), Part I, section 2.16 identifies NQA as being responsible for performing an independent review and approval and verification of implementation of the corrective action for condition adverse to quality reports (CAQRs) which they initiate, all significant CAQRs and all hardware related CAQRs. Additionally, NQA is responsible for closing out the CAQR after it has been verified complete. NQAM, Part I, section 2.16 is being transitioned into an NPS document (Standard 3.1.1).
43.	Sections 10.2.2E and F of the NQA Plan refer to "significant" CAQs.	Refer to the response to RAI number 16C(2). 16.4)
44.	Section 6.3.3 of the NQA Plan indicates that Management Programs is responsible for the development of a QA records program. Clarify who is responsible for implementing the program. (17.2)	The first paragraph of the NQA Program Policy Statement states: "Implementation of the NQA Program and the achievement of quality objectives are the responsibility of each employee." As discussed in section 4.1, "NP management, while carrying out their functions, are required to fully comply with all aspects of the NQA Program applicable to their organization and ensure proper implementation." Also, this is addressed in section 5.0, "NP organizations performing activities within the scope of the NQA Program shall implement the program through written procedures and instructions."
45.	Section 12.1 of the NQA Plan addresses "internal and contractor/supplier audits." Clarify that internal audits include Nuclear Power and indicate whether audits of other TVA organizations are part of the internal or part of the contractor/supplier audit program. (18A1a)	Internal audits means audits of internal TVA organizations which perform safety-related activities, including Nuclear power and other TVA organizations which support the nuclear program. Section 12.1 has been revised to provide this clarification.

TVA RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION
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Reference: Letter from Suzanne C. Black (NRC) to Oliver D. Kingsley, Jr. (TVA) dated July 10, 1989

	NRC Request for Additional Information (RAI)	Disposition
46.	Section 6.1.2B.3 of the NQA Plan indicates that procedures and instructions are reviewed "to ensure proper implementation of QA requirements." Clarify what this means and who does it. (17.2.6.2)	Refer to the response provided to RAI number 26.
47.	Enclosure 2 submitted with the NQA Plan states, in response to SRP item 17.2.10.2, "Inspection only by NQA." This is not in accordance with section 9.1.2.C of the plan which states: "Inspections shall be performed by NQA, or other qualified individuals approved by QA. Clarify. (17.2.10.2)	The intent of section 9.1.2.C includes inspections performed by NQA or those approved by NQA. This section of Enclosure 2 has been revised to clarify.
48.	Section 12.2F.2 of the NQA Plan addresses TVA's graded approach to audits of contractors/suppliers. Clarify that this approach does not supersed the guidance of RG 1.144 that contractors/suppliers be audited at least once every three years. (18B3)	Section 12.2F.2 of the NQA Plan, now section 12.2H2, does not supersede the guidance of RG 1.144. The graded approach to audits allows TVA to more effectively evaluate selected contractors/suppliers and increase the degree of surveillance, inspection, and audit activities where warranted to more than triennially.
49.	Section 4.1.9G.5 of the NQA Plan indicates that the Manager, EA, reports to both the Vice President of NE and the Manager of NQA. This section of the plan also lists responsibilities and authorities of the Manager, EA. Clarify which responsibilities and authorities are reportable to the Vice President of NE and which are reportable to the Manager of NQA.	See response to RAI number 6 which addresses section 4.1.9.G.5.
50.	The list of source requirement documents for NQA Plan Section 6.2, Document Control, should include Generic Letter 83-28, which provides requirements for licensee control of vendor manuals. Clarify.	TVA committed to the Nuclear Task Action Committee (NUTAC) Report on NRC Generic Letter 83-28, "Required Actions Based on Generic Implications of Salem ATWS Events", section 2.2.2 in a letter from L. M. Mills to H. R. Denton dated September 17, 1984 and subsequent supplemental responses.

TVA RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION
NUCLEAR QUALITY ASSURANCE PLAN
9/1/89

Reference: Letter from Suzanne C. Black (NRC) to Oliver D. Kingsley, Jr. (TVA) dated July 10, 1989

	NRC Request for Additional Information (RAI)	Disposition
50.	(continued)	Although Generic Letter 83-28 requires the establishment of vendor information controls, it is not appropriate to list this document as a source requirement document in the NQA Plan. Commitments made to NRC by TVA with regard to generic letters are monitored and tracked by Nuclear Licensing and Regulatory Affairs (NLRA) to ensure implementation.
51.	The definition of notification point on page 86 of the NQA Plan states that "work may proceed after contacting the organization responsible for the notification point." Clarify whether the contacting organization or the contacted organization is responsible for deciding whether or not to proceed.	Contacted organization is responsible for the decision as to whether or not the work may proceed. Definition for "notification point" in section 15.0 has been revised to clarify this responsibility.
52.	Appendix D of the NQA Plan indicates that RG 1.29 specifies that some Seismic Category I items are not safety related. RG 1.29 indicates that all Seismic Category I items are safety-related. Clarify the figure in this regard.	We agree that all Category I items are safety related. However, Regulatory Position 2 of RG 1.29 addresses quality-related items that, upon failure, could affect a Category I item. The intent of Appendix D was to recognize these quality-related items (i.e., Seismic Category I [L]) that could affect a Category I safety-related item (see Appendix C section 4.3). In order to better clarify our program Appendix D has been revised.

EA TRANSITION MATRIX

Transition of EA Functions Into NQA and NE

Functions (NPP Volume I, Rev. 6)		Reference - NQA Plan: Specific	Reference - NQA Plan: Other
The following QA functions have been integrated into NQA:			
1. Auditing and monitoring engineering activities to determine compliance with QA programmatic requirements.	Auditing Monitoring	- 4.1.9.G.1.a,c - 4.1.9.G.3.b,h - 4.1.9.G.2.k - 4.1.5K - 9.2.1	4.1.9B 4.1.9.B,G.2.d 9.2.3 12.3.A,B
2. Conducting in-depth technical audits and surveillances, utilizing engineering expertise outside of NQA as necessary to assess the technical adequacy of engineering work.	Audits Surveillances	- 4.1.9.G.1.a,b - 4.1.9.G.2.k - 4.1.9.G.3.h	4.1.9.B 4.1.9.B,G.2.d
3. Overview of procured engineering services, including review of procurement documents for QA requirements; auditing contractors who provide engineering services; performing pre-award surveys and reviewing contractor QA programs.	Onsite Offsite	- 4.1.9.G.3.i - 4.1.9.G.1.a,f - 4.1.9.G.2.a,l,m	4.1.9.B 8.2.3.B 12.3B
4. Trending of engineering problems identified in programmatic and technical verification activities.	Trending	- 4.1.9.G.2.g - 10.3.D,E	4.1.2.F 4.1.9.D
5. CAQ coordination for Corporate NE CAQs and generic implications evaluation for nuclear engineering CAQs.	Coordination Generic	- 4.1.9.G.2.g - 4.1.6.C (1) (1) Done by Licensing under NTD.	
The following non-QA functions are the responsibility of the NE Chief Engineer's staff:			
1. Developing and maintaining quality-related Nuclear Engineering Procedures (NEPs).	NEP	- Generically covered in 4.1.2.C	4.1.5
2. Ensuring that engineering procedures interface effectively with organizations outside Nuclear Engineering.	NEP	- Generically covered in 4.1.2.K	
3. Ensuring adequate training for NE employees in the use of quality-related NEPs.	NEP	- Generically covered in 4.1.2.H,J	
4. Trending of engineering related problems to determine existence of adverse trends and corrective action to be taken.	NEP	- Generically covered in 4.1.2.F	

EA TRANSITION MATRIX

Transition of EA Functions Into NQA and NE

Functions (NQA Plan RAI #6)	Corresponding Functions
Section 4.1.9.G.5 - of NQA Plan dated 3/30/89	
a. Developing, approving, maintaining, and controlling engineering quality program procedures.	Refer to NE non-QA functions-item 1 on previous page
b. Ensuring that engineering procedures interface effectively with organizations outside Nuclear Engineering.	Refer to NE non-QA functions-item 2 on previous page
c. Facilitating implementation of engineering procedures through project Engineering Assurance engineers.	Refer to footnote 1
d. Auditing and monitoring engineering activities to evaluate compliance with QA programmatic requirements.	Refer to NQA QA functions-item 1
e. Verifying the technical adequacy and effectivness of engineering work.	Refer to NQA QA functions-item 2
f. Overview of procured engineering services, including review of procurement documents for QA rquirements and auditing contractors who provide engineering services.	Refer to NQA QA functions item 3
g. Assessing trends, problem identification, and administering corrective and preventative action for internally and externally identified engineering problems.	Refer to NQA QA functions items 4-5
h. Issuing formal stop work orders as required.	Refer to NQA Plan paragraphs 4.1.9.E, 4.1.9.G.3.g, 10.3.B, C
Section 10.3.E- of NQA Plan dated 3/30/89	
NE-EA is responsible to establish and maintain trend procedures for quality indicators generated by engineering assurance activities such as audits, reviews, and checks.	Refer to NQA Plan paragraphs 4.1.2.F, 10.3.D, E

Footnotes:

1. Since the dissolution of EA project assignment groups at each site, this activity has reverted back to the project engineering group responsible.

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Additional Changes Associated With the TVA NQA Plan Revision 0 09/01/89

Changes		Justification
1. General - All pages have been identified as TVA-NQAPLN89.		
2. Section 9.5 and 13.0 Table of Contents		
• Titles have been corrected and Appendix I has been added.		
3. Section 3.3 "NQAP Overview"	This section was revised to clarify that the Nuclear Components Manual (NCM) and the QA Manual for ASME Section III are the same. Also, corrected reference to Appendix B.	Clarification
4. Section 4.1. "Function of Organizations"		
• Subsection 4.1.1	This section was revised to reflect organization responsibility changes from Nuclear Construction (NC) to New Projects.	Organization change. (Refer to footnote 1.)
• Subsection 4.1.2.C	This section was revised to add the words "control, and maintain" to better cover the total procedure and instruction process.	Clarification
• Subsection 4.1.2.F	This section was revised to add the words "including assessing trends, for internally and externally identified problems" to assure each Nuclear Power organization assesses CAQ trends and takes corrective action.	Enhancement of the QA program.
• Subsection 4.1.2.I	This section was added to assign each Nuclear Power responsibility for initiating stop work.	Clarification that each Nuclear Power organization is responsible for initiating "stop work" when warranted. Refer to Section 10.2.6. and 10.3B
• Subsection 4.1.2.J	This section was added to assign responsibility to each Nuclear Power organization to ensure appropriate indoctrination and training for their personnel.	Clarification. (Refer to section 11.0.)
• Subsection 4.1.4	This section was revised to reflect organization responsibility changes from Nuclear Construction to New Projects.	Organization change. (Refer to footnote 1.)
• Subsections 4.1.4.A and 4.1.4.B	These items were added to clarify New Projects' responsibilities.	Clarification.

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	Changes		Justification
4. Section 4.1. "Function of Organizations" (Continued)			
•	Subsection 4.1.4.C	Removed from section 4.1.4 and made line item. Changed line items from alpha to numerical identifiers.	Clarification and editorial.
•	Subsection 4.1.4.C.2	This section was revised to add the word "line" to agree with the title of section 9.1.	Editorial
•	Subsection 4.1.4.C.7	This section was added to agree with the responsibilities in section 9.8.3.B.	Editorial
•	Subsection 4.1.4.C.8	This section was added to assign clear responsibility for deferred plants to New Projects.	Clarification. (Refer to footnote 1.)
•	Subsection 4.1.4.G	This section was deleted because it was redundant to requirement specified in section 5.0.	Editorial
•	Subsection 4.1.5.E	This section was revised to add the words "and line verification" to agree with the title of section 9.1.	Editorial
•	Subsection 4.1.5.H	This section was revised to agree with the title of section 9.5.	Editorial
•	Subsection 4.1.5.K	This section was deleted since Engineering Assurance (EA) auditing functions are the responsibility of NQA.	The NE-EA auditing functions were transferred to NQA. (Refer to RAI number 6.)
•	Subsection 4.1.6	This section was revised to correct Direction to Director. Also, added two additional responsibilities for the NTD.	Editorial and clarification (Refer to footnote 1)
•	Subsections 4.1.6.A, B, C, and D	These sections were revised to better define the main functions of the Vice President and Nuclear Technical Director.	Editorial. (Refer to footnote 1.)
•	Subsection 4.1.8A-9 and 10	These were deleted to agree with the responsibilities i sections 9.5.3 and 9.6.3; renumbered remaining sections.	Editorial
•	Subsection 4.1.8.A.14	This section was revised to agree with the title of section 11.0.	Editorial
•	Subsection 4.1.8.A.15	This section was revised to agree with the title of section 13.0	Editorial

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	Changes	Justification
• Subsection 4.1.8.B.1	This section was revised for clarification and to agree with TVA's Topical Report TVA-NPOD89, "Nuclear Power Organization Description."	Editorial. (Refer to footnote 1.)
• Subsection 4.1.8.B.4e	This section was revised to reflect organizational responsibility changes.	Organizational Changes (Refer to footnote 1.)
• Subsection 4.1.8.B.5a	This section was revised for clarification to include "and evaluations" and "engineering and design".	Clarification
• Subsection 4.1.9.A	This section was revised to correct NQAP to Nuclear Quality Assurance Plan.	Editorial
• Subsection 4.1.9.G	This section was revised to reflect NQA organization title change and added the Special Programs Manager.	Organization change. (Refer to footnote 1.)
• Subsections 4.1.9.2a, b, c, h, i, and j	These sections were revised or added for clarification of the NQA Quality Program Manager's responsibilities.	Clarification of functions. (Refer to footnote 1.)
• Subsection 4.1.9.3b	This section was revised to clarify the site NQA Quality Engineering functions.	Clarification
• Subsection 4.1.9.3c	This section was revised to change the word monitor to monitoring.	Editorial
• Subsection 4.1.9.4	This section was revised to reflect organization responsibility, title and functional changes.	Organization change. (Refer to footnote 1.)
• Subsection 4.1.9.5	This section was added to reflect the responsibilities of the NQA Special Programs Manager.	Organization change. (Refer to footnote 1.)
• Subsection 4.1.10.A	This section was revised to add the words "efficient, reliable" for clarification.	Editorial
• Section 4.1.10.B	Removed the word "of".	Editorial
• Subsections 4.1.10.C.1 and C.5	These sections were revised to add the words "line", 'control," and "compliance" respectively to agree with the titles of Sections 9.1 and 9.5.	Editorial

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	Changes	Justification
• Subsection 4.1.10.C.6	This section was added to agree with the responsibilities in section 9.3.3.A.	Editorial
• Subsection 4.1.11	This section was revised to add word "for".	Editorial
5. Section 5.0 Nuclear QA Program	This section was revised to reflect organization responsibility changes from "NC" to "New Projects" and to change "written declaration" to "notification" to the Vice President of NPP rather than the Vice President of NA&S.	Organization change. (Refer to footnote 1.)
6. Section 5.1 Program Scope		
• Subsection 5.1.B.8	This section was revised to remove Environmental Protection from the scope and to add Safety Parameter Display System (SPDS) to the scope of the NQA Plan. Also renumbered remaining sections.	The Environmental Protection Program does not meet the guidance in Appendix C, Guidelines for Determination of TVA Identified Quality-Related Classifications". SPDS classified as quality related at Nuclear Engineering direction.
• Subsection 5.1.C	This section was revised to reflect organization responsibility from "NC" to "New Projects".	Organization change. (Refer to footnote 1.)
7. 6.1 Procedures and Instructions		
• Subsection 6.1.2.B.3	This section was revised to replace "implementation" with "incorpora[illegible]".	Clarification
• Subsection 6.1.4B	This section was revised to encompass all of section 5.0 as source requirements.	Enhancement
8. Section 6.3 QA Records		
• Subsection 6.3.2.C	This section was revised to change the word "records" to "QA documents".	Clarification
9. Section 7.2 Program Elements		
• Subsection 7.2.1.H	The word "section" was added for clarification.	Editorial

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	Changes	Justification
10. Section 7.4 Source Requirement Documents		
• Subsection 7.4.B	The letter "A" was changed to "a" for clarification.	Editorial
11. Section 8.0 Procurement and Material Control		
• Subsection 8.1.2.B.8	This section was revised to more clearly address purchase specifications for spare and replacement materials and components.	Clarification
• Subsections 8.1.3, 8.2.3, and 8.3.3	These sections were revised to reflect organization responsibility change from the Vice President, NE, to the Vice President and Nuclear Technical Director (NTD) for nuclear fuel and fuel-related components and services.	Organization change. The Nuclear Fuels organization reports to NTD. (Refer to footnote 1.)
• Subsection 8.2.2.E	This section was revised to include pre-installation testing inspection and make receipt inspection a prerequisite.	Clarification
12. Section 9.0 Control of Plant Activities		
• Subsection 9.1.2.B.1	This section was revised to delete "consistent with the operation's im rtance to nuclear safety"	Redundant to criteria specified in Section 5.2.A.1
• Subsection 9.1.2.B.2	This section was revised to clarify when "independent verification" will apply.	Clarification
• Subsection 9.3.3.A & 9.3.3.D	This section was revised to add NPP as an organization responsible for Special Processes and to reflect organization changes from NC to "New Projects".	Clarification and organization changes (refer to footnote 1.)
• Subsection 9.3.3.C	This section was revised to add an additional responsibility to the Manager, NQA.	Enhancement
• Subsection 9.3.4.L	This section was revised to upgrade ASNT-TC-1A-1984	Upgraded because of 10-year update requirement which will occur at Browns Ferry in near future.
• Subsections 9.4.3A and C.	These sections were evised to reflect organization responsibility changes from NC to "New Projects".	Organization change. (Refer to footnote 1.)
• Section 9.5 and 9.5.2C	These sections were revised to add the word compliance. for clarification.	To clarify what installed I&C devices are under Section 9.5 requirements.

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	Changes	Justification
12. Section 9.0 Control of Plant Activities (Continued)		
• Subsection 9.5.1	This section was revised to replace "functionability" with "functionality".	Clarification
• Section 9.5.2A1a	This section was revised to add the word selection.	Clarification
• Subsection 9.5.2.B.1	This section was revised for removal of unnecessary wording.	Clarification
• Subsection 9.5.2.C.2	This section was revised to add the word qualification for clarification.	Clarification
• Subsections 9.6.3.A and C	These sections were revised to reflect responsibility changes from NC to "New Projects". Also, "program" was added to first sentence of 9.6.3.A	Organization change and clarification. (Refer to footnote 1.)
• Subsections 9.6.3.B	This section was revised to reflect Vice President, NE, organization responsibility change to the Vice President and Nuclear Technical Director (NTD) for nuclear fuel and fuel-related components and services.	Organization change. (Refer to footnote 1.)
• Subsection 9.7.2.A.4	This section was revised to change the reference from "section 7.2.1" to "section 6.1.2.F".	To correct referenced section.
• Subsection 9.7.3.A	This section was revised to reflect organization responsibility changes from NC to "New Projects".	Organization change. (Refer to footnote 1.)
• Subsection 9.7.3.C	The section 9.7.3.C of the plan submitted 3/30/89, Rev. 0 was deleted and the next two paragraphs were relettered to "C" and "D". The new "C" which was 9.7.3.D has been revised to reflect organization responsibility changes from NC to "New Projects".	The line organization is responsible for ensuring proper implementation of the inspection, test, and operating status. NQA is responsible for inspection as covered in section 9.1. Organization change. (Refer to footnote 1.)
• Subsection 9.7.3.D	Paragraph designation was changed, see 9.7.3.C above.	
• Subsection 9.7.4	The section 7.3.4 was in error and has been correctly renumbered from "7.3.4" to section "9.7.4".	Editorial

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	Changes	Justification
• Subsection 9.8.3.B	This section was revised to reflect organization changes from NC to "New Projects".	Organization changes. (Refer to footnote 1.)
• Subsection 9.8.4.E	This section was revised to add the ANSI standard title.	Editorial
13. Section 10.0 Conditions Adverse to Quality		
• Subsection 10.2.2.D	This section was revised to remove "ing" from: scrapping, repairing, and reworking.	Editorial
14. Section 13.0 Control of Computer Systems and Data.		
• Changed title to "Computer Software and Data."		Editorial
15. Section 14.1 Regulations		
• Subsection 14.1	This section was revised to add other 10 CFR 50 sections used as source references in the plan.	To add regulation references inadvertently omitted.
• Subsection 14.4	Deleted reference to NP Policies	Enhancement
• Subsection 14.5	Deleted reference to NP Directives	Enhancement
16. 15.0 Definitions		
• Nuclear Plant Security	This definition was revised for clarification.	Bomb threats are redundant to physical security events in Nuclear Security.
• Independent Verification	Revised the definition for clarification.	Clarification
• Installed Compliance Instrumentation and Control I&C devices.	Revised the title for consistency (refer to section 9.5) and the definition for clarification.	Clarification
• Programs	Corrected reference to Section 4.2.1B to 5.1.B	Corrected reference.

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	Changes	Justification
• Startup Tests	The definition was revised for clarification.	Editorial
17. Appendix A - This was revised to reflect organization responsible change from NC to New Projects and to add the TVA identified quality-related program under implementation requirements and effectivity and renumbered remaining sections.		Organization change. TVA identified quality-related program and features identified in the scope are to be reviewed and the applicable NQAP elements identified and effective in accordance with Appendix A, section 2.6.
Appendix B - R.G. 1.28 - Corrected revision from "6/72" to revision 3, "8/85".		
Appendix B - R.G. 1.58 - Upgraded alternative to ASNT recommended practice SNT-TC-1A-1984. Also, revised same alternative.		Upgraded because of 10-year update which will occur soon at Browns Ferry Nuclear Plant. The 1984 practice includes the five-year requirement for recertification of Level III Inspectors.
Appendix C - Revised paragraph 3.0.		Provided clarification and removed redundancy from paragraph 3.0.

Footnote:

1. TVA's Topical Report, TVA-NPOD89, "Nuclear Power Organization Description"