



TENNESSEE VALLEY AUTHORITY
NUCLEAR QUALITY ASSURANCE MANUAL

TITLE: Q LIST

GENERIC PROCEDURE

NUMBER: ID-QAP-2.7

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REVISION LOG

REVISION

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DESCRIPTION

0

5-18-86

Revised format and updated organization; also made minor clarifications.

(RIMS QA Record No.: L16 860603 356)

Information on previous revisions to this procedure can be obtained from QSR.

1.0 PURPOSE AND SCOPE

This procedure describes the development, control, and application of a "Q List" for documenting and classifying structures, systems, and components that fall within the scope of TVA's design, construction, and operation quality assurance programs for nuclear plants.

2.0 REFERENCES

2.1 NQAM Part I, Section 1.3, "Limited QA Program Requirements."

2.2 Q List Specification, Dated October 3, 1985.

3.0 DEFINITIONS

3.1 The Q List--A listing of features (structures, systems, and components) of a TVA nuclear plant that are subject to controls mandated by the NQAM.

3.2 Special features--Those plant structures, systems, and components which do not serve a primary safety function and to which special management controls are to be applied because of TVA commitments, Federal regulations, or because of their importance to the TVA mission.

3.3 Special Management Controls--The system of plans and actions specified by responsible managers that, when applied to the activities which affect special features, provide adequate confidence that the feature will perform as intended. These controls shall be specified in the form of a "limited QA program" in accordance with NQAM, Part I, Section 1.3.

4.0 RESPONSIBILITIES

4.1 Division of Nuclear Engineering (DNE)

4.1.1 Develops, issues, and maintains the Q Lists.

4.1.2 Resolves Division of Nuclear Construction (DNC), Division of Power System Operations (PSO), and Nuclear Site Director (NSD) comments, concerns, and requested changes.

- 4.1.3 Coordinates with NSD on proposed changes to the Q List.
 - 4.1.4 For DNE activities, applies 10 CFR 50, Appendix B quality assurance program requirements to safety-related features and special management controls under the limited QA program to special features identified on the Q Lists.
 - 4.1.5 Revises the Q Lists to reflect design changes.
 - 4.1.6 Controls the Q Lists as design output documents.
 - 4.1.7 Establishes the plant-specific definition for "safety-related" which applies to each nuclear plant in design output documents.
 - 4.1.8 Defines the set of safety functions used in the Q Lists in design output documents for each nuclear plant.
- 4.2 DNC
- 4.2.1 Notifies DNE of needed changes to the Q Lists.
 - 4.2.2 For DNC activities, applies 10 CFR 50, Appendix B quality assurance program requirements to safety-related features and applies special management controls (under the limited QA program) to special features identified on the Q Lists.
- 4.3 NSD
- 4.3.1 Notifies DNE of needed changes to the Q List.
 - 4.3.2 Provides a list of additional special features and items requiring application of special management controls under the limited QA program to DNE for incorporation into the Q Lists. Reviews proposed changes to the Q List.
 - 4.3.3 For activities under his control, applies 10 CFR 50, Appendix B quality assurance program requirements to safety-related features and special management controls under the limited QA program (as a minimum) to special features identified on the Q Lists.

4.3.4 Notifies DNE to change the Q Lists appropriately as the result of completed field modifications which removed safety-related or special features or changed the safety function(s) that a feature must be capable of performing.

4.4 Division of Nuclear Quality Assurance (DNQA)

Maintains a written description of QA program requirements for special features and for items which must meet full Appendix B requirements.

4.5 PSO

4.5.1 Notifies DNE of needed changes to the Q Lists.

4.5.2 For PSO activities, applies 10 CFR 50, Appendix B quality assurance program requirements to safety-related features and special management controls to special features identified on the Q Lists.

5.0 REQUIREMENTS

5.1 GENERAL

5.1.1 DNE is responsible for developing and maintaining a TVA Q List for each nuclear plant. The Q List will include both safety-related¹ features and special features to which a limited QA program applies.

5.1.2 The safety functions that each feature is designed to perform will be identified in a generic or summary manner in accordance with Q List specifications (see reference 2.2 for nonmandatory guidance). The Q List shall be used by all TVA organizations to identify safety-related and special features to which quality assurance or special management controls (as specified within the limited QA program) respectively, must be applied.

5.1.3 When applicable, other design output documents shall be used to provide a complete understanding of the safety functions and the requirements placed on the feature to assure that it will be capable of performing as intended.

5.2 PREPARATION and MAINTENANCE

5.2.1 DNE shall develop and maintain a Q List for each TVA nuclear plant. The Q List shall identify all safety-related and special features.

¹As used in this document, safety-related is equivalent to DNE's classification of structures, systems, and components performing primary safety functions.

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- 5.2.2 The Q Lists shall be unitized, distinguishing between individual units and common features of a multiple unit plant. When features in each unit are identical, a single entry in the Q List identifying each unit designator (i.e., 1 and 2) is preferred to two distinct entries so that the Q List volume is minimized.
- 5.2.3 The Q Lists shall include the identification of safety functions that each feature is designed to perform. To accomplish this, a set of safety functions shall be established and defined by DNE for each plant and documented in a design output document.
- 5.2.4 The Q Lists shall be developed to identify features down to the level needed by NSD and DNC and shall be expandable to address items at the component and part level as necessary to effectively reflect and/or control the design, procurement, construction, modification, operation, and maintenance of the affected project. Each feature shall be identified using TVA unique identifications where possible.
- 5.2.5 Safety-related features shall be distinguishable from special features on the Q Lists. DNE shall define safety-related as it applies to each nuclear plant in design output documents.
- 5.2.6 NSDs shall identify special features that they believe special management controls should be applied to for incorporation into the Q List. These features need not have been considered as special features during previous design and installation activities.
- 5.2.7 Changes to the Q Lists shall be controlled by DNE through the engineering change notice (ECN) process. No deletion of safety-related or special features, or changes in safety function(s) resulting from design changes that will be implemented after receipt of an operating license shall be made to the Q List until after the resultant field modifications are completed. ECN packages shall clearly indicate that changes to the Q List are to be made upon field completion. NSD shall notify DNE within 30 days of field completion to revise the Q List due to implementation of the design change.
- 5.2.8 DNE shall coordinate proposed Q List changes not resulting from plant modifications with NSD prior to issue.
- 5.2.9 DNC, NSD, and PSO shall ensure that the Q List provides the necessary level of detail. Upon request, DNE shall revise the Q List to provide the requested level of detail.

5.3 CONTROL and DISTRIBUTION

- 5.3.1 DNE shall issue and maintain the Q Lists as approved and controlled design output documents.
- 5.3.2 NSD and DNC shall identify needed changes to the Q Lists through established change control methods, i.e., Field Change Requests (FCR) and Design Change Requests (DCR). DNE changes to the Q Lists shall be made through the use of ECNs.

5.4 Q LIST APPLICATION

- 5.4.1 TVA organizations shall apply a 10 CFR 50, Appendix B quality assurance program to the safety-related features identified on the Q List.
- 5.4.2 TVA organizations shall specify and apply (see NQAM, Part I, Section 1.3) special management controls under the limited QA program to the special features identified on the Q List. The special management controls are to assure compliance to TVA commitments and Federal Regulations and assure the capability to perform as intended. DNE, DNC, and NSD shall prepare implementing procedures as needed to delineate the management controls to be applied for special features.
- 5.4.3 The Q List can be used to identify the safety function(s) which the feature is intended to be capable of performing. This will assist in the performance of Unreviewed Safety Question Determinations (USQDs), quality assurance classification for procurement, selection of replacement parts, application of quality controls, normal operation activities, etc.

5.5 IMPLEMENTATION

- 5.5.1 The Q Lists for Watts Bar and Bellefonte shall be implemented by DNC immediately upon approval and issue of the respective Q Lists.
- 5.5.2 NSDs for Watts Bar and Bellefonte shall implement the Q List and incorporate its requirements into its plant operating instructions prior to receipt of an operating license for the first unit.
- 5.5.3 The BFN and SQN Q Lists will be put into effect by the NSD at a date mutually agreed to by DNE and the NSD.