

APPENDIX 1B

1B QUALITY ASSURANCE PROGRAM FOR THE OPERATIONS PHASE

The Quality Assurance Program for the Calvert Cliffs Nuclear Power Plant is the latest version of the Quality Assurance (QA) Topical Report.

In addition the specific commitments in the Quality Assurance Topical Report, Calvert Cliffs has the following commitments and site-specific exceptions to the following Regulatory Guides and American National Standards Institute (ANSI) and American Nuclear Society (ANS) Standards.

1B.1 REGULATORY GUIDE 1.8

Personnel Selection and Training (Revision 4).

Calvert Cliffs has adopted ANSI/ANS 3.1-2014, which is endorsed by Regulatory Guide 1.8, as the standard to be used for the selection, qualification and training of site personnel.

1B.2 REGULATORY GUIDE 1.16

Reporting of Operating Information - Appendix A Technical Specifications (Revision 4, August 1975).

Calvert Cliffs is committed to this standard, as modified by the Calvert Cliffs Technical Specifications.

1B.3 REGULATORY GUIDE 1.26, REVISION 3

Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants.

Calvert Cliffs takes the following alternative:

Calvert Cliffs' Quality Assurance program is applied to structures, systems, components, and activities that have been designated safety-related because they prevent accidents or mitigate the consequences of postulated accidents that could cause undue risk to the health or safety of the public. The QA program is also applicable to designated non-safety-related structures, systems, components, activities, and services as required by regulations. Designated non-safety-related program requirements are based on a graded approach to Quality Assurance required to meet applicable regulatory designated requirements and guidance. The level of QA program controls placed on designated non-safety-related items are defined in QA program documents and/or implementing procedures. Controls have been established for specifying on a Quality List all safety-related structures, systems, components, and activities that are subject to the requirements of the QA program.

1B.4 REGULATORY GUIDE 1.37

Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants (March 16, 1973).

This endorses ANSI N45.2.1 (February 26, 1973). Calvert Cliffs takes one exception to ANSI N45.2.1, as follows:

Requirement

Subsection 3.2 outlines requirements for demineralized water.

Response

Calvert Cliffs specifications for demineralized water are different from the specifications outlined in the standard.

Reason

Calvert Cliffs specifications for demineralized water are consistent with guidelines provided by the Nuclear Steam Supply System supplier. Calvert Cliffs specifications are generally more restrictive than those specified by ANSI N45.2.1.

1B.5 REGULATORY GUIDE 1.38

Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants (Revision 2, May 1977).

This endorses ANSI N45.2.2 (December 20, 1972). Calvert Cliffs takes seven exceptions to ANSI N45.2.2, as follows:

Item 1

Requirement

Subsection 2.4 could be interpreted to mean that on-site and off-site personnel who perform any inspection, examination, or testing activities related to the packing, shipping, receiving, storage, and handling of items for nuclear power plants shall be qualified in accordance with ANSI N45.2.6.

Response

Calvert Cliffs requires that only persons who are responsible for approving items for acceptance shall be qualified in accordance with Regulatory Guide 1.58 (which endorses ANSI N45.2.6) and that personnel who verify that storage areas meet requirements will be qualified to either Regulatory Guide 1.58 (which endorses ANSI N45.2.6) or ANSI N45.2.23.

Reason

Our receipt inspection procedures require persons who approve items for acceptance to be qualified in accordance with Regulatory Guide 1.58 (which endorse ANSI N45.2.6). Quality and Performance Assessment assessors verify that storage areas meet requirements. All other inspection, examination, and testing activities are subject to review by persons qualified to Regulatory Guide 1.58 (which endorses ANSI N45.2.6).

Item 2

Requirement

The second sentence of Subsection 2.4 requires that:
Off-site inspection, examination, or testing shall be audited and monitored by personnel who are qualified in accordance with ANSI N45.2.6.

Response

Calvert Cliffs uses personnel qualified in accordance with ANSI N45.2.23 to perform auditing and monitoring functions.

Reason

The qualification requirements for auditors cannot always be met by persons qualified to Regulatory Guide 1.58 (which endorses ANSI N45.2.6).

Item 3

Requirement

Subsection 2.7 requires that activities covered by the Standard shall be divided into four levels, though recognizing that within the scope of each level there may be a range of controls depending on the importance of the item to safety and reliability.

Response

1. The level of protective measures defined by Subsection 2.7 are applied to Basic Component Purchases.
2. Engineering or Supply Chain personnel will determine the level of protective measures to be applied to Commercial Grade purchases.

Reason

Calvert Cliffs' position is as follows:

1. For Commercial Grade items, it is not always possible to assign a level of classification in accordance with ANSI N45.2.2, as many items are purchased after they have been packaged by the manufacturer and shipped to his local agent, the wholesaler.
2. Experience has shown that the level of protection assigned to Commercial Grade items by vendors is adequate.

Item 4

Requirement

Subsection 3.0 specifies detailed requirements for packing items for each level defined in Subsection 2.7.

Response

Calvert Cliffs has replaced Section 3.0 with the following:

1. Packaging for Shipment to Calvert Cliffs Nuclear Power Plant (CCNPP)
Engineering or Supply Chain personnel shall ensure that procurement documents for Basic Component and Commercial Grade item purchases either indicate that the normal methods of packaging and shipment used by industry in general are acceptable for the items being procured or specify the level of protection assigned to the item and the requirement that the vendor conform to applicable requirements for items in that classification defined in Regulatory Guide 1.38, Revision 2 - March 1977.
2. The normal methods of packaging used by the industry in general are acceptable for items being procured as Commercial Grade.
3. Packaging for Storage by CCNPP
In general, the packaging used by the vendor to ship items for all types of purchases to CCNPP need not be retained after the item is received by CCNPP, provided that the item is stored in an area that meets the requirements for a storage area for the level of protection assigned to the item. Special or unique items, however, may require special protective measures. For such unusual items, the Department that initiated the purchase, together with Engineering or Supply Chain personnel shall identify if any of the requirements of Section 6.4.2 of ANSI N45.2.2-1972 apply.

Reason

1. This substitution will ensure that the item will receive adequate protection during shipment and storage, thus eliminating unnecessary restrictions and enabling CCNPP to use commercial sources to the utmost.
2. Experience shows that industrial practices for packaging Commercial Grade items are adequate for most applications.

Item 5

Requirement

Section 4.0 defines shipping requirements related to the protection levels assigned to items.

Response

Calvert Cliffs has replaced Section 4.0 with the following:

1. Shipping to CCNPP

Calvert Cliffs will invoke the requirements for shipping specified in Section 4.0 of ANSI N45.2.2-1972 on Basic Component purchases only when Engineering or Supply Chain personnel have specified in procurement documents that the item shall be packaged in conformance with ANSI N45.2.2, Section 3.8.

Calvert Cliffs will not invoke the requirements of ANSI N45.2.2-1972, Section 4.0, on Commercial Grade item purchases.

2. Shipping from CCNPP

Items shipped from CCNPP need not conform to any of the requirements of ANSI N45.2.2, but the organization that packs and handles the item shall provide roughly the same level of protection that the item was given during shipment to CCNPP.

Reason

If engineering personnel have determined that the vendor's methods of packaging are acceptable, they have already determined that the suppliers's methods of shipping are adequate. As items are shipped from CCNPP only for repair, the detailed requirements specified in Section 4.0 of ANSI N45.2.2 are not necessary.

Item 6

Requirement

Subsection 6.4 gives detailed requirements for care of items in storage, according to the protection levels assigned to the items.

Response

Calvert Cliffs does not require items to be stored in the packing used for shipment if the storage level in the area provides the same protection as the level of packing assigned to the items. Caps, covers, etc., will be required only if specified by Engineering or Supply Chain personnel during the procurement process. If an item is taken from one storage area to another, however, the persons who move it are responsible for ensuring, as applicable, that additional packing is supplied to give adequate protection during transportation.

Reason

The degree of protection given an item during storage should be tailored to the importance of the item to safety and the probability of deterioration during storage; to base storage requirements purely on the categories in Subsection 2.7 of ANSI N45.2.2-1972 is impractical. Calvert Cliffs requires Engineering and Supply Chain personnel to specify requirements more closely related to the actual function of items and to storage conditions.

Item 7

Requirement

Subsection 7.3.3 requires compliance with a series of ANSI documents.

Response

Calvert Cliffs controls for the use of hoisting equipment are compatible with the Standards listed in Subsection 7.3.3 of ANSI N45.2.2, although at the discretion of the Plant General Manager, they need not be compatible with documents referred to in these documents.

Reason

Lower-level documents referred to in the documents listed in Subparagraph 7.3.3 will not necessarily affect the ability of CCNPP personnel to properly handle safety-related items and could lead to confusion.

1B.6 REGULATORY GUIDE 1.54

Quality Assurance Requirements for Protective Coatings Applied to Water-Cooled Nuclear Power Plants (June 1973).

This endorses ANSI N101.4 (November 28, 1972). Calvert Cliffs takes an exception to ANSI N101.4, as follows:

Requirement

Section 1.2 specifies applicability requirements for the Standard.

Response

Calvert Cliffs requires that only activities performed inside containment structures and related to protective coatings applied to ferritic steels, aluminum, stainless steel, zinc-coated (galvanized) steel, concrete, or masonry surfaces shall conform to applicable Section of ANSI N101.4.

Reason

Deterioration of protective coatings applied to surfaces outside containment structures would have no detrimental effects on the safe operation of the plant.

1B.7 REGULATORY GUIDE 1.68

Preoperational and Initial Startup Test Programs for Water-Cooled Power Reactors (November 1973).

Calvert Cliffs is committed to this standard. The preoperational and initial startup test program was completed prior to each Unit startup and is described in Section 13.1.

1B.8 REGULATORY GUIDE 1.94

Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants (Revision 1, April 1976).

In lieu of this Regulatory Guide, Calvert Cliffs conforms to ANSI N45.2.5, Draft 3, Revision 1 (November 1973).