

**V. C. Summer Nuclear Station, Units 2 and 3  
COL Application  
Part 2, FSAR**

CHAPTER 17  
QUALITY ASSURANCE

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**CHAPTER 17**  
**QUALITY ASSURANCE**

17.1 QUALITY ASSURANCE DURING THE DESIGN AND CONSTRUCTION PHASES

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

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Replace the information in **DCD Section 17.1** with the following information.

VCS COL 17.5-1

South Carolina Electric & Gas (SCE&G) is responsible for the establishment and execution of quality assurance program requirements during the design and construction phases of V.C. Summer Nuclear Station Units 2 and 3. SCE&G may delegate and has delegated to others, such as NuStart Energy Development, LLC, Westinghouse Electric Company, and Bechtel Power Corporation, the work of establishing and executing the quality assurance program, or any parts thereof, but retains responsibility for the quality assurance program.

Effective during COL application development, through and until COL issuance, the NuStart Energy Development, LLC (NuStart) Quality Assurance Plan (**Reference 201**), the Westinghouse Electric Company Quality Management System (**DCD Section 17.6**) and Bechtel Power Corporation Nuclear Quality Assurance Manual (**Reference 205**) define the QA program requirements for design activities. Safety-related construction activities at SCE&G are not planned before the COL is issued.

NuStart was created by multiple utilities and, as such, is comprised of multiple member utilities to include SCE&G. NuStart's purpose is two-fold of which the first is demonstrating the licensing process defined by 10 CFR Part 52. The second purpose is to work with reactor vendors in completing the engineering work for the standardized plant designs.

Bechtel Power Corporation was contracted by SCE&G to develop the V. C. Summer Nuclear Station Units 2 and 3 COL application. This included the process of collection, review and analysis of specific data for site characterization and was controlled under the Bechtel Power Corporation Quality Assurance Manual (**Reference 205**).

SCE&G maintains oversight of the COL application development as well as design and construction activities under its existing 10 CFR Part 50, Appendix B, program as described in the NRC approved SCE&G V.C. Summer Nuclear Station Unit 1 "Operational Quality Assurance Plan" (**Reference 206**). The Unit 1 Quality Assurance Program complies with the requirements of Regulatory Guide 1.28, Revision 0 – "Quality Assurance Program Requirements (Design and Construction)". The "Operational Quality Assurance Plan" (**Reference 206**) is supplemented, in part, by the SCE&G "New Nuclear Deployment Quality

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Assurance Plan” (Reference 204). The “New Nuclear Deployment Quality Assurance Plan (Reference 204) serves as an interfacing document between the work activities of the New Nuclear Deployment organization and the “Operational Quality Assurance Plan” (Reference 206). It assures that the proper administrative controls and the quality of activities related to the procurement of services, equipment, oversight of construction/manufacturing, and licensing activities being performed within the New Nuclear Deployment organization conform to the applicable requirements of 10 CFR 50, Appendix B. These plans provide the necessary quality assurance guidance for oversight of site characterization activities and COL application content providers. SCE&G maintains this oversight through the review and approval of the NuStart Quality Assurance Plan (Reference 201) and industry standard COL application sections as well as conducting audits/surveillances of Bechtel activities, and providing input to the COL application development, including, but not limited to, review of COL application content.

Implementation of the applicable portions of the “Quality Assurance Program Description” (QAPD) discussed in Section 17.5 begins at COL issuance. The program establishes the quality assurance program requirements for the remaining portion of the design and construction phases and for operations; full implementation of the operations related requirements will be no later than as indicated in FSAR Table 13.4-201.

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17.2 QUALITY ASSURANCE DURING THE OPERATIONS PHASE

This **section** of the referenced DCD is incorporated by reference with no departures or supplements.

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17.3 QUALITY ASSURANCE DURING DESIGN, PROCUREMENT,  
FABRICATION, INSPECTION, AND/OR TESTING OF NUCLEAR  
POWER PLANT ITEMS

This **section** of the referenced DCD is incorporated by reference with no departures or supplements.

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17.4 DESIGN RELIABILITY ASSURANCE PROGRAM

This **section** of the referenced DCD is incorporated by reference with the following departures and/or supplements.

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STD SUP 17.4-1

The quality assurance requirements for non-safety related SSCs within the scope of D-RAP is in accordance with the Quality Assurance Program Description (QAPD), Part III.

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STD DEP 1.1-1    17.5    QUALITY ASSURANCE PROGRAM DESCRIPTION - NEW LICENSE APPLICANTS

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VCS COL 17.5-1    The Quality Assurance Program in place during the design, construction, and  
STD COL 17.5-2    operations phases is described in the QAPD, which is maintained as a separate  
STD COL 17.5-4    document. This QAPD is incorporated by reference (see [Table 1.6-201](#)). This  
STD COL 17.5-8    QAPD is based on NEI 06-14A, "Quality Assurance Program Description,"  
([Reference 207](#)).

Conformance statements for QA-related Regulatory Guides (including Regulatory Guides 1.28, 1.30, 1.33, 1.38, 1.39, 1.94, and 1.116) are provided in [Appendix 1AA](#). While many Regulatory Guide positions can be identified as applicable to the scope of work identified and addressed by the DCD and others can be identified as applicable to the scope of work identified and addressed by the COLA, some QA guidance related positions could be accomplished by either scope of work and thus be addressed in either the DCD or the COLA. These positions are primarily dependent on who performs the work. The DCD conformance statement indicates an exception to apply NQA-1. The COLA identifies an exception to apply NQA-1. Per [DCD Section 17.3](#), WEC work performed up to March 15, 2007 applied a 1991 version of the standard. A 1994 version of the standard is applied for work performed after that date by WEC. If the work is performed under the applicant's COL program, the 1994 version of NQA-1 identified in the COLA QAPD is applied. Thus, DCD scope (identified in [DCD Appendix 1A](#)) and "remaining scope" differentiate the application of the guidance identified in these Regulatory Guides.

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VCS COL 17.5-1    The QAPD is the SCE&G VCSNS Units 2 and 3 Quality Assurance Program Description.

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STD COL 17.5-4    [Table 13.4-201](#) provides milestones for operational quality assurance program implementation. |

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VCS COL 17.5-1    The Quality Assurance Program in place prior to implementation of the QAPD is described in [Section 17.1](#).

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STD DEP 1.1-1    17.6    MAINTENANCE RULE PROGRAM

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STD SUP 17.6-1    This section incorporates by reference NEI 07-02A, “Generic FSAR Template  
STD COL 3.8-5    Guidance for Maintenance Rule Program Description for Plants Licensed Under  
10 CFR Part 52,” (Reference 208) with the following supplemental information.  
See Table 1.6-201.

Table 13.4-201 provides milestones for maintenance rule program implementation.

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The text of the template provided in NEI 07-02A is generically numbered as “17.X.” When the template is incorporated by reference into this FSAR, section numbering is changed from “17.X” to “17.6.”

STD SUP 17.6-1    Descriptions of the programs listed in Subsection 17.6.3 of NEI 07-02A are  
provided in the following FSAR chapters/sections:

The maintenance rule program (Section 17.6)

The quality assurance program (Section 17.5)

Inservice inspection program (Sections 5.2 and 6.6)

Inservice testing program (Section 3.9)

The technical specifications surveillance test program (Chapter 16)

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STD SUP 17.6-2    Condition monitoring of underground or inaccessible cables is incorporated into  
the maintenance rule program. The cable condition monitoring program  
incorporates lessons learned from industry operating experience, addresses  
regulatory guidance, and utilizes information from detailed design and  
procurement documents to determine the appropriate inspections, tests and  
monitoring criteria for underground and inaccessible cables within the scope of  
the maintenance rule (i.e., 10 CFR 50.65). The program takes into consideration  
Generic Letter 2007-01.

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STD DEP 1.1-1    17.7    COMBINED LICENSE INFORMATION ITEMS

**Section 17.5** of the referenced DCD is incorporated by reference with the following departures and/or supplements.

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VCS COL 17.5-1    This COL Item is addressed in **Sections 17.1** and **17.5**.

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STD COL 17.5-2    This COL Item is addressed in **Section 17.5**.

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STD COL 17.5-4    This COL Item is addressed in **Section 17.5**.

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STD COL 17.5-8    This COL Item is addressed in **Section 17.5**.

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STD DEP 1.1-1    17.8    REFERENCES

**Section 17.6** of the referenced DCD is incorporated by reference with the following departures and/or supplements.

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- VCS SUP 17.8-1    201.    NuStart Energy, LLC., “NuStart Energy Project Instruction – Quality Assurance Plan,” PI-009.
202.    “NRC Audit Report for the South Carolina Electric and Gas (SCE&G) VC Summer Nuclear Plant Combined License Application Review,” J. W. Chung to A. M. Monroe, November 16, 2007 (ML073100387).
203.    Not used.
204.    South Carolina Electric & Gas, “New Nuclear Deployment Quality Assurance Plan,” Rev. 2, June 4, 2009.
205.    Bechtel Power Corporation, “Nuclear Quality Assurance Manual,” Rev. 4, 11/01/02.
206.    South Carolina Electric & Gas, V.C. Summer Nuclear Station Unit 1 “Operational Quality Assurance Plan,” Rev. 27, February 21, 2005.
207.    Nuclear Energy Institute, Technical Report NEI 06-14A, “Quality Assurance Program Description,” Revision 7, July 2009.
208.    Nuclear Energy Institute, “Generic FSAR Template Guidance for Maintenance Rule Program Description for Plants Licensed Under 10 CFR Part 52,” NEI 07-02A, Revision 0, March 2008 (ML080910149).