

## PMLeeCol PEmails

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**From:** Manny Comar  
**Sent:** Thursday, August 14, 2008 4:09 PM  
**To:** pshastings@duke-energy.com; mcnolan@duke-energy.com; tjbowling@duke-energy.com; leenuclear@duke-energy.com  
**Cc:** Brian Hughes; PMLeeCol PEmails; Manny Comar  
**Subject:** SRP Section: 14.02 - Initial Plant Test Program - Design Certification and New License Applicants  
**Attachments:** RAI 227\_lee.doc

To All,

Attached is the Draft RAI 227 related to SRP Section: 14.02 Initial Plant Test Program for William States Lee III Nuclear Station Units 1 and 2

Please let me know if you would like to discuss the RAI before it is made official.

Manny Comar  
Senior Project Manager  
NRO/DNRL/NWE1  
Nuclear Regulatory Commission  
301-415-3863  
<mailto:manny.comar@nrc.gov>

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**From:** Manny Comar

**Created By:** Manny.Comar@nrc.gov

**Recipients:**

"Brian Hughes" <Brian.Hughes@nrc.gov>  
Tracking Status: None  
"PMLeeCol PEmails" <PMLeeCol.PEmails@nrc.gov>  
Tracking Status: None  
"Manny Comar" <Manny.Comar@nrc.gov>  
Tracking Status: None  
"pshastings@duke-energy.com" <pshastings@duke-energy.com>  
Tracking Status: None  
"mcnolan@duke-energy.com" <mcnolan@duke-energy.com>  
Tracking Status: None  
"tjbowling@duke-energy.com" <tjbowling@duke-energy.com>  
Tracking Status: None  
"leenuclear@duke-energy.com" <leenuclear@duke-energy.com>  
Tracking Status: None

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William States Lee III Nuclear Station Units 1 and 2  
Duke Energy Carolinas, LLC  
Docket No. 52-018 and 52-019  
SRP Section: 14.02 - Initial Plant Test Program - Design Certification and New License Applicants  
Application Section: 14.2

QUESTIONS from Quality and Vendor Branch 1 (CQVP)

14.02-\*\*\*

Startup Administrative Manual (SAM) In a letter sent to Westinghouse on February 28, 2008, the NRC staff requested additional information regarding Technical Report (TR) APP-GW-GLR-038, Revision 1, "AP1000 Conduct of Test Programs," (hereafter TR-71B), currently used by Westinghouse to address combined license (COL) information item 14.4.3, "Conduct of the Test Program." The NRC staff stated in this letter that COL information item 14.4.3 requires applicants referencing the Westinghouse's AP1000 Design Certification Document (DCD) to provide administrative controls for the conduct of the initial test program. It specifically states: "The Combined License application is responsible for a startup administration manual (procedure) which contains the administration procedures and requirements that govern the activities associated with the plant initial test program, as identified in Section 14.2.3." Consistent with COL information item 14.4.3, the NRC staff concluded that the Westinghouse's AP1000 SAM should establish a minimum set of requirements for the implementation of the facility's initial test program. Further, it is expected that each COL holder will tailor its initial test program by using the Westinghouse's AP1000 SAM as the basis to establish site-specific procedures or instructions for implementation. To address COL information item 14.4.3, and to provide an increased level of standardization in the design certification material that will be referenced by COL applicants, the NRC staff requested Westinghouse to provide complete, detailed information, in the form of an AP1000 SAM, describing the methodology that will be implemented by applicants referencing the AP1000 DCD in the following areas: (1) organizational and staffing responsibilities, (2) test procedure development, issuance, review, approval, distribution, control, and modifications, (3) conduct of the initial test program, (4) initial test program planning and scheduling, (5) review, evaluation, and approval of test results, (6) conformance with Regulatory Guides, (7) utilization of reactor operating and testing experiences in test program development, and (8) trial use of plant operating and emergency procedures. This approach subsumes COL information item 4.4.1, "Organization and Staffing," and COL information item 14.4.4, "Review and Evaluation of Test Results," into the AP1000 SAM. The NRC staff also recognizes that, although Westinghouse can address the majority of these items on a generic basis, there are certain items that require site-specific or licensee-specific details. In those areas where Westinghouse cannot provide detailed information because it requires site-specific information, a COL holder item should be identified. This will allow the COL holder to address this information in the site-specific SAM. On this basis, the NRC staff requests that Duke Energy: • Provide a description of the administrative controls that will be implemented during the conduct of the initial test program, consistent with Section 14.2 of the SRP, or • Update Section 14.2 of the William States Lee III COL application to incorporate the information that will be provided by Westinghouse in the revised TR-71B as well as all relevant Lee-specific details.

14.02-\*\*\*

Organizational Responsibilities SRP Section 14.2, paragraph II.3.A, "Management Organizations," states that the COL applicant should provide organizational descriptions of the principal management positions responsible for the planning, executing, and documenting preoperational and startup testing activities. Additionally, the applicant should provide organizational descriptions of any augmenting organizations or other personnel who will manage or execute any phase of the test program, and the responsibilities, interfaces, and authorities of the principal participants. Section 14.2.2.1 of the William States Lee III COL application contains information regarding the organizational structure of the Plant Test and Operations (PT&O), which will be the organization responsible for the initial test program. Subsections 14.2.2.1.1 through 14.2.2.1.5 describe the functions of the Manager in charge of the PT&O, the Functional Manager in charge of PT&O support, the PT&O Engineers, the Functional Manager in charge of Startup, and the Startup Engineers, respectively. Additionally, subsection 14.2.2.1.4 includes a reference to TR-71B, which is currently under review by the NRC staff. In a letter sent to Westinghouse on February 28, 2008, the NRC staff requested additional information regarding the organizational structure described in Section 3.0 of Appendix A to TR-71B. Specifically, the NRC staff requested that Westinghouse provide a general description of the responsibilities, authorities, and interfaces of the organizations responsible for the overall administration and technical direction of the initial test program, in addition to the organizations described in Section 3.0 of Appendix A to TR-71B. The description should include, but is not limited to: • Licensee's Operations Group • Licensee's Maintenance Group • Licensee's Corrective Action Organization • Licensee's Health Physics/Chemistry Group • Licensee's Quality Assurance Group • Construction BOP Engineering • Construction Services Group • Construction Services Procurement Group • Construction Services Quality Group • Construction Services Training Group • Westinghouse Site Engineering Group • Westinghouse Engineering Leads • Preoperational and Startup Test Teams (including Startup Managers/Plant Managers/Startup Engineers, as applicable). This description should also include considerations of staffing effects that could result from overlapping initial test programs at multi-unit sites. Consistent with Section 14.2 of the SRP, the NRC staff requests that Duke Energy: • Provide a description of the responsibilities, authorities, and interfaces of the organizations responsible for the overall administration and technical direction of the initial test program, in addition to the organizations described in Subsections 14.2.2.1.1 through 14.2.2.1.5 of the William States Lee III COL application, or • Update Section 14.2 of the William States Lee III COL application to incorporate the information that will be provided by Westinghouse in the revised TR-71B, including site-specific organizational responsibilities, authorities, and interfaces applicable to William States Lee III Units 1 & 2.

14.02-\*\*\*

Staff Responsibilities, Authorities, and Qualifications SRP Section 14.2, paragraph II.3.D, "Staff Responsibilities, Authorities, and Qualifications," states that the COL applicant should describe the education, training, and experience requirements established for each management and operating staff member - including the NSSS vendor, architect-engineer, and other major contractors, subcontractors, and vendors, as appropriate - who will conduct preoperational and startup tests and will develop testing,

operating, and emergency procedures. In addition, the SRP states that the applicant should develop a training program for each functional group of employees in the organization relative to the schedule for preoperational testing and initial startup testing to ensure that the necessary plant staff is ready to begin the test program. Subsection 14.2.2.2 of the William States Lee III COL application contains information regarding personnel training and qualification requirements. This subsection states that personnel in the PT&O organization are qualified and trained in accordance with the "AP1000 Startup Site Administrative Manual – Program Management Description," which is part of TR-71B and currently under review by the NRC staff. In a letter sent to Westinghouse on February 28, 2008, the NRC staff requested additional information regarding the education, training, qualification, and experience requirements for organizations responsible for the conduct of preoperational and startup tests, and for organizations that will develop testing, operating, and emergency procedures. Consistent with Section 14.2 of the SRP, the NRC staff requests that Duke Energy: • Describe the education, training, qualification, and experience requirements for organizations responsible for the conduct of preoperational and startup tests, and for organizations that will develop testing, operating, and emergency procedures. Develop a training program for each functional group of employees in the organization relative to the schedule for preoperational testing and initial startup testing to ensure that the necessary plant staff will be ready to begin the test program. Additionally, Duke Energy needs to include provisions for the development of a training program that will serve as supplemental training to plant operators, consistent with Three Mile Island (TMI) Action Plan Item I.G.1 of NUREG-0660, NUREG-0694, and NUREG-0737, or • Update Section 14.2 of the William States Lee III COL application to incorporate the information that will be provided by Westinghouse in the revised TR-71B, including site-specific information applicable to William States Lee III Units 1 & 2, or justify an alternate approach.

#### 14.02-\*\*\*

Test Specifications and Test Procedures Standard Review Plan (SRP) Section 14.2, paragraph II.3.E, "Development, Review, and Approval of Test Procedures," states that the COL applicant should provide a description of the methodology used for the generation, review, and approval of preoperational and startup test procedures. This description should include provisions to ensure the availability of approved test procedures for review by NRC inspectors at least 60 days before their intended use, and provide timely notification to NRC of changes in approved test procedures that have been made available for NRC review. In a letter sent to Westinghouse on August 26, 2007, the NRC staff rejected APP-GW-GLR-037, Revision 0, "AP1000 Test Specifications and Test Procedures," (TR-71A), used by Westinghouse to address combined license (COL) information item 14.4.2, "Test Specifications and Test Procedures." The NRC staff stated in this letter that COL information item 14.4.2 calls for the actual submittal of test specifications and test procedures by a COL holder to NRC onsite inspectors for review and approval before as-built systems and plant features are tested in the field. Further, the NRC staff stated in the letter that a COL applicant could propose to subsume COL information item 14.4-2 under the license condition that will be in place to authorize low-power and power ascension testing. Section 14.4 of the William States Lee III COL application incorporates by reference the requirements of Westinghouse's DCD subsection 14.2.3, "Test Specifications and Test Procedures." In addition, Part 10 of the William States Lee III COL application contains information regarding COL information item 14.4-2, and further refers to proposed License Condition

#6. The NRC staff reviewed this License Condition but was unable to find provisions to ensure the availability of approved test procedures for review by NRC inspectors at least 60 days before their intended use, or provisions to ensure timely notification to NRC of changes in approved test procedures that have been made available for NRC review. Duke Energy needs to modify proposed License Condition #6 to ensure the timely availability of approved test procedures for review by NRC inspectors and ensure timely notification to NRC of changes in approved test procedures, consistent with Section 14.2 of the SRP or justify an alternative approach.