

#### UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D.C. 20555-0001

May 4, 2012

Mr. William R. Gideon, Vice President Carolina Power & Light Company H.B. Robinson Steam Electric Plant, Unit 2 3581 West Entrance Road Hartsville, South Carolina 29550

## SUBJECT: H.B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 – REQUEST FOR ADDITIONAL INFORMATION RELATED TO RELIEF REQUESTS (RR)-1, RR-2 AND RR-3 FOR THE FIFTH 10-YEAR INTERVAL INSERVICE TESTING PROGRAM PLAN (TAC NOS. ME8258, ME8259, AND ME8260)

Dear Mr. Gideon:

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated March 16, 2012 (Agencywide Documents Access and Management System Accession No. ML110310012), Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc., submitted relief requests (RR)-1, RR-2 and RR-3 for the Inservice Testing Program Plan for the Fifth Ten-Year Interval for the H. B. Robinson Steam Electric Plant, Unit No. 2.

The NRC staff is reviewing your submittal and has determined that additional information is required to complete the review. The specific information requested is addressed in the enclosure to this letter. During a discussion with your staff on April 10, 2012, it was agreed that you would provide a response by May 11, 2012.

The NRC staff considers that timely responses to requests for additional information help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources.

Please contact me at requested (301) 415-3302 if you have any questions.

Sincerely,

araceli T. Billoon lola

Araceli Billoch Colón, Project Manager Plant Licensing Branch II-2 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Docket No. 50-261

Enclosure: Request for Additional Information

cc w/encl: Distribution via ListServ

# REQUEST FOR ADDITIONAL INFORMATION

## REGARDING H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT 2

## INSERVICE TESTING PROGRAM PLAN FOR THE FIFTH-TEN YEAR INTERVAL

## DOCKET NO. 50-261

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated March 16, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML110310012), Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc., submitted relief requests (RR)-1, RR-2 and RR-3 for the Inservice Testing Program (IST) Plan for the Fifth Ten-Year Interval for the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBRSEP). The NRC staff has been reviewing the submittal and has determined that additional information is needed to complete its review.

## IST-RR-1: "Comprehensive Test Procedure"

**RAI-1:** The note in Code Case OMN-18 states, in part, "an Owner could categorize a pump that otherwise meets the requirements of Group B, as a Group A pump, and test according to this Code Case." Confirm that the Group B pumps in your alternative request (Containment Spray pumps and Safety Injection pumps) will be categorized in your IST program as Group A pumps.

RAI-2: Provide the type (horizontal centrifugal, vertical line shaft, etc.) for each pump.

**RAI-3:** The request states that "ISTB-1300, "Supplemental Definitions," defines uniform criteria for designating Group A and Group B pumps." In the 2004 Edition of the ASME OM Code, ISTB-1300 is titled "Pump Categories," and ISTB-2000 is titled "Supplemental Definitions." State, which is the correct section that should be referenced.

**RAI-4:** The request references Table ISTB-5121-1, "Vertical Line Shaft Centrifugal Pump Acceptance Criteria." In the 2004 Edition of the ASME OM Code, Table ISTB-5121-1 is titled "Centrifugal Pump Test Acceptance Criteria." Confirm whether Table ISTB-5121-1 is the correct reference.

**RAI-5:** In the section titled "Specific Relief Requested," it is stated that "Pursuant to 10 CFR 50.55a(a)(3), relief is requested from the requirements of the ASME OM Code, 2004 Edition through 2006 Addenda, Subsection ISTB, paragraph ISTB-5323, "Comprehensive Test Procedure." It is also stated that, "Paragraph ISTB-5323 describes requirements necessary to properly implement a comprehensive pump test (CPT) for both centrifugal and vertical line shaft centrifugal pumps." ISTB-5323 pertains to positive displacement pumps, and it appears that the pumps listed in this request are not positive displacement pumps. Confirm whether ISTB-5323 is the correct reference.

**RAI-6:** In the section titled "Specific Relief Requested," it is stated that, "HBRSEP, Unit No. 2, proposes to conduct quarterly Group A testing at the CPT designated flow rate using pressure instrumentation accurate to 0.5 percent unless calibrated flow measuring instruments are not available." Explain why pressure instrumentation is noted instead of flow instrumentation in this statement.

**RAI-7:** Paragraph (a) in the "Proposed Alternative" section states that "Pumps tested quarterly using this alternative must be tested within  $\pm 20$  percent of pump design flow, as is required for the biennial Comprehensive Test in ISTB-3300(e)(1) and ISTB-3300(e)(2)." ISTB-3300(e)(2) pertains to Group A and Group B tests. Explain why ISTB-3300(e)(2) is referenced.

**RAI-8:** Paragraph (b) in the "Proposed Alternative" section states, in part, "(an accuracy improvement from  $\pm 2$  percent to  $\pm 0.5$  percent unless calibrated instruments are not available)." Elaborate and state why calibrated instruments would not be available, what instruments would be available and used, and why the substitute instruments would be acceptable.

**RAI-9:** It is stated that HBRSEP is also going to include a periodic verification test in the proposed testing. Provide more details on this test (frequency, flow rates, measurements, etc.).

### IST-RR-2: "Required Instrumentation Accuracy"

RAI -1: Provide the type (horizontal centrifugal, vertical line shaft, etc.) for each pump.

**RAI-2:** In the section "Applicable Code Requirement," it is stated that, "Table ISTB-3510-1, "Required Instrument Accuracy," requires digital pump flow-rate instrument accuracy to be  $\pm 2$  percent over the calibrated range." Table ISTB-3510-1 only requires that flow rate instrument accuracy be  $\pm 2$  percent. ISTB-3510(a) requires that the required digital instrument accuracy be over the calibrated range. Should ISTB- 3510(a) also be referenced in the "Applicable Code Requirement" and Specific Relief Requested" sections?

**RAI-3:** In the section "Basis for Requesting Relief," it is stated that, "Previous experience and testing indicates that non-calibrated ultrasonic flow measurements are highly accurate when installed and operated properly." Provide the justification for this statement.

**RAI-4:** In the section "Basis for Requesting Relief," it is stated that, "All ultrasonic flow instruments are calibrated in accordance with ISTB-3510-1..." Confirm whether Table ISTB-3510-1 should be referenced in lieu of ISTB-3510-1.

**RAI-5:** Explain why the ultrasonic flow instruments that have an intrinsic accuracy of  $\pm 3$  percent cannot be calibrated to  $\pm 2$  percent accuracy. Also explain why another set of ultrasonic flow instruments with  $\pm 2$  percent accuracy cannot be obtained for these tests.

## IST-RR-3: "Category C Check Valve Testing"

**RAI-1:** There is no discussion on how HBRSEP is implementing Appendix II. Appendix II is only mandatory if you elect to use ISTC-5222 instead of the requirements of ISTC sections ISTC-3510, ISTC-3520, ISTC-3530, ISTC-3550, and ISTC-5221. If HBRSEP is implementing a condition-monitoring program per ISTC-5222 provide:

- 1) The valves in the program
- 2) A description of the program
- 3) The history performance of the valves in the program
- 4) If HBRSEP is planning to implement a condition-monitoring program during the fifth IST interval.

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/RA/

Araceli Billoch Colón, Project Manager Plant Licensing Branch II-2 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

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