



Carolina Power & Light Company

MAY 1 1986

SERIAL: NLS-86-120

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
UNIT NO. 1 - DOCKET NO. 50-400
MANIPULATOR CRANE TESTING

Dear Mr. Denton:

Carolina Power & Light Company (CP&L) hereby submits clarification concerning the Shearon Harris Nuclear Power Plant (SHNPP) compliance with Regulatory Guide 1.68, Appendix A, Paragraph 1.m.4. This regulatory guide paragraph provides guidance that a full-operational test at 100 percent of rated load be conducted on cranes which are used to handle irradiated fuel.

CP&L will comply with this guidance by conducting a full-operational test of the SHNPP manipulator crane using the Dummy Fuel Assembly and the Dummy Rod Cluster Control Assembly (RCCA). The dummy assemblies weigh approximately 98.7 percent of the weight of an actual fuel assembly and RCCA. Although the load rating of the SHNPP manipulator crane exceeds the weight of a fuel assembly and RCCA, the maximum critical load as defined in NUREG-0554 would be the weight of a fuel assembly and RCCA. Testing of the manipulator crane using anything other than the Dummy Fuel Assembly and the RCCA is impractical due to the manipulator crane design which incorporates a mast feature, which will not allow it to lift objects which do not have physical dimensions and features similar to a fuel assembly.

CP&L considers testing of the manipulator crane using the Dummy Fuel Assembly and RCCA as an acceptable method of complying with the guidance of Regulatory Guide 1.68. Attached are draft FSAR pages which are marked up to reflect this clarification. These pages will be incorporated into a future amendment of the SHNPP FSAR.

If you have any questions or concerns about the clarification provided above, please contact me as soon as possible.

Yours very truly,

S. R. Zimmerman
Manager

Nuclear Licensing Section

JHE/pgp (3663JDK)

Attachment

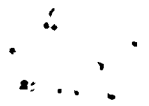
cc: Mr. B. C. Buckley (NRC)
Mr. G. F. Maxwell (NRC-SHNPP)
Dr. J. Nelson Grace (NRC-RII)
Mr. Travis Payne (KUDZU)
Mr. Daniel F. Read (CHANGE/ELP)
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14.2.7 PERFORMANCE OF TEST PROGRAMS WITH REGULATORY GUIDES

The following applicable regulatory guides will be used as guidance in development of the initial test program:

- a) Regulatory Guide 1.20, Rev. 2, May, 1976, Comprehensive Vibration Assessment Program for Reactor Internals During Preoperational and Initial Startup Testing.
- b) Regulatory Guide 1.37, Rev. 0, March, 1973, Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Plants.
- c) Regulatory Guide 1.41, Rev. 0, March, 1973, Preoperational Testing of Redundant On-Site Electric Power Systems to Verify Proper Load Group Assignments.
- d) Regulatory Guide 1.52, Rev. 2, March, 1978, Design, Testing, and Maintenance Criteria for Engineered - Safety - Feature Atmosphere Cleanup System Air Filtration and Absorption Units of Light-Water-Cooled Nuclear Power Plants.
- e) Regulatory Guide 1.68, Rev. 2, August, 1978, Initial Test Programs for Water-Cooled Nuclear Power Plants.

Reg. Position
Clarifications/Exceptions

Appendix A
Paragraph 1.m.4

Full operational testing of the Manipulator Crane may be conducted using the ~~Dummy~~ ^{Dummy} Fuel Assembly with a RCCA.

- f) Regulatory Guide 1.68.2, Rev. 1, July, 1978, Initial Startup Test Program to Demonstrate Remote Shutdown Capability for Water-Cooled Nuclear Power Plants.

1) ~~1) The Manipulator Crane passes a load test using the rated load specified in manipulator crane instruction manual, Stearns-Roger, Inc. in accordance with Regulatory Guide 1.104 (125 percent of rated load for static test and 100 percent of rated load for dynamic test).~~

→ 1) The Manipulator Crane passes a full operational test using the ^{Dummy} Fuel Assembly containing ^{on RFA} The Spent Fuel Bridge Crane, New Fuel Elevator, Spent Fuel Cask Handling Crane, Fuel Handling Building Auxiliary Crane and the Manipulator Crane Auxiliary Hoist pass a full operational test of 100% of rated load.

2) ~~The spent fuel bridge crane, spent fuel cask handling crane, and the manipulator crane auxiliary hoist pass load tests in accordance with Regulatory Guide 1.104 (125 percent of rated load for static test and 100 percent of rated load for dynamic test).~~

2) The Spent Fuel Bridge Crane, Spent Fuel Cask Handling Crane, Fuel Handling Building Auxiliary Crane, Manipulator Crane, New Fuel Elevator and the Manipulator Crane Auxiliary Hoist pass a static load test of 125% of rated load:

3) Fuel handling equipment including any protective interlocks and safety devices operate in accordance with the Fuel Transfer System Technical Manual, Westinghouse Electric Corporation and the Manipulator Crane Technical Manual, Stearns-Roger, Incorporated.