July 17, 2000

Mr. John S. Keenan, Vice President
Carolina Power & Light Company
Brunswick Steam Electric Plant
Post Office Box 10429
Southport, North Carolina 28461

SUBJECT: RESPONSE TO LICENSEE'S DISCUSSION OF ACTION ITEMS IDENTIFIED IN THIRD 10-YEAR INTERVAL INSERVICE TESTING PROGRAM, BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2 (TAC NOS. MA8201 AND MA8202)

Dear Mr. Keenan:

By letter dated February 25, 1998, Carolina Power & Light Company (CP&L or the licensee) submitted the third 10-year interval inservice testing (IST) program for the Brunswick Steam Electric Plant, Units 1 and 2. With assistance from Idaho National Engineering and Environmental Laboratory, the staff evaluated the submittal and identified several action items as discussed in the February 9, 1999, safety evaluation (SE). You were asked to address the action items within 1 year from the date of the SE. The CP&L letter of February 9, 2000, describes the actions taken, actions in progress, or actions to be taken, to address each of the items contained in the SE. The sections below provide the NRC staff's review and evaluation of the response, which was reviewed against the requirements of the 1989 Edition of American Society of Mechanical Engineers (ASME) Code, Section XI, Subsections IWP and IWV.

TER, APPENDIX A ACTION ITEMS

Action Item 1, Valve Relief Request VRR-01

The request for relief involved the check valves on the Residual Heat Removal (RHR) service water system (SWS) injection lines into RHR. The licensee stated that it would exercise these valves with a mechanical exerciser and measure the breakaway force (or torque) during refueling outages when loop B of the RHR system is drained. Further, the licensee stated that it "anticipated" the draining of the RHR system to occur every other refueling outage. The staff conditioned this request on the basis that the check valves breakaway force (or torque) would be measured at least every other refueling outage. The licensee's response to the staff's condition was to remove this valve from the IST Program with regard to testing in the open direction.

The staff realizes that the licensee may remove these check valves from the program as it relates to testing in the open direction. The licensee's response is acceptable. However, the adequacy of the IST program scope is subject to NRC inspection.

Action Item 2, Valve Relief Request VRR-02

The request for relief involved the stroke time measurement requirements of OM-10, Paragraph 4.2.1.4, for the automatic depressurization system (ADS) valves. The TER prepared by Idaho National Engineering and Environmental Laboratory recommended that the request not be approved and the licensee submit a revised relief request. However, the SE prepared by the staff took exception to the contractor's technical evaluation report (TER) and approved the relief request in accordance with 10 CFR 50.55a(f)(6)(i) based upon the impracticality of performing testing in accordance with the Code requirements. However, the staff reviewed the revised relief request and finds that the staff SE approval of VRR-02 is still valid; therefore, no further relief is necessary.

Action Item 3, Valve Relief Request VRR-03

This item stated that the licensee should implement reasonable objective acceptance criteria for the instrument air supply check valves to air-operated valves to ensure that significant degradation of these valves is detected and corrective action taken when needed. The licensee replied that by letter dated October 13, 1999, it withdrew its request on the basis that the current mode of testing satisfies the requirements of ASME OM Part 10. This is acceptable.

Action Item 4, TER No. 7

The licensee was requested to review the information contained within its Engineering Procedure 0ENP-16.7 as it relates to the testing frequency of safety-related valves. It appeared to the staff as if the licensee's Engineering Procedure 0ENP-16.7 did not receive the same level of control as the IST Program. The licensee responded by saying the IST Program exists within four separate Engineering Procedures or documents which are controlled by the Brunswick work control process which is tracked by its Automated Maintenance Management System. The licensee also stated that changes to the documents that comprise its IST Program required technical and safety reviews in accordance with 10 CFR 50.59. The licensee's response is acceptable.

Action Item 5, TER No. 7a

The licensee was requested to review its Engineering Procedure paragraph 5.1.3 concerning valves that are disassembled to verify closure capability and are not required to be partial-flow tested after re-assembly. The licensee's response stated that the statement has been removed and that partial-flow testing is now performed on valves that are disassembled to verify closure capability. This is acceptable.

Action Item 6, TER No. 7b

The licensee was requested to review the testing of valves in a group because valve groups S.G.-10/P and S.G.-20/P both list five valves in a group. To meet the guidance in Generic Letter (GL) 89-04 and the published staff positions, the licensee should reduce the number of

valves in the groups or provide justification in the IST program for staff review. The licensee's response stated that for these five valves, each valve in the group would be inspected and exercised at least once every 6 years. This meets the intent of NUREG-1482. The licensee's response is acceptable.

Action Item 7, TER No. 7b

The licensee was requested to review its Engineering Procedure, paragraph 5.3.3 as it does not address the hardship issue for interval extension or expansion of group size. The licensee's response stated that they had revised plant procedure 0ENP-16.7, paragraph 5.3.6 to address the extreme hardship and IST Program documentation issue associated with disassembly and inspection of valve groups. This is acceptable.

Action Item 8, TER No. 7c

The licensee was requested to review valve groups SDG-1Q and SDG-2Q to determine if the requisite conditions for grouping valves for sample disassembly and inspection met the guidance in GL 89-04, Position 2. These valves groups were classified as "Demin.Water" and "Condensate" valves. The licensee response stated that upon review the valves were regrouped to differentiate the conditions to which the valves are subjected. This is acceptable.

Action Item 9 TER No. 7d

The licensee was requested to review its Engineering Procedure 0ENP-16.7 because the staff was concerned that it should not be used as the sole mechanism for identifying check valve sample groups, test intervals, or group sizes that deviated from the criteria specified in GL 89-04, Position 2. The licensee stated that 0ENP-16.7 is one element of Brunswick's IST Program whose documents and changes are controlled under 10 CFR 50.59. In addition, 0ENP-16.7 serves as a management tool for the IST Program Manager. Therefore, additional controls are not warranted. This is acceptable.

TER APPENDIX B ACTION ITEMS

High Pressure Coolant Injection Action Items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13

These items involved errors, inconsistencies, or omissions in the IST program document. The majority of these items involved the inconsistencies or omissions of information in the IST Program Valve Tables. The licensee stated that these errors, inconsistencies, or omissions have been resolved in the IST Program Valve Tables. The staff finds this to be acceptable.

SWS Action Item 1

The licensee was requested to verify that the valve position indication shown on the piping and instrument diagrams (P&IDs) for certain valves receive the appropriate inspection in accordance with OM Code, Part 10, Paragraph 4.1. The licensee stated that the valves in question do not have remote position indication and those that do have remote position indication receive the required checks. This is acceptable.

SWS Action Items 2, 3, and 4

These items involved errors, inconsistencies, or omissions in the IST program document. The majority of these items involved the inconsistencies or omissions of information in the IST Program Valve Tables. The licensee stated that these errors, inconsistencies, or omissions have been resolved in the IST Program Valve Tables. The staff finds this to be acceptable.

SWS Action Item 5

The licensee was requested to review P&ID's to determine if instruments for measuring pressure and other IST test parameters at the pumps on the service water header are present as they are not shown on the P&ID's. The licensee stated that calculational methods for differential pressure measurements are maintained in its test procedures as stipulated by NUREG-1482, Section 5.5.3. The licensee also stated that vibration is directly measured. This is acceptable.

SWS Action Item 6

The licensee was requested to review and determine if the 20-inch manual butterfly valves 1(2)-SW-V146 performed an active safety function in the closed direction to prevent diversion of flow to non-essential loads. The licensee replied that the valves do not perform an active safety function and do not play a role in shutting down the reactor, maintaining the reactor in cold shutdown, or mitigating the consequences of an accident. This is acceptable.

SWS Action Item 7

The licensee was requested to review and determine if check valves 1(2)-SW-V192 performed an active safety function in the closed direction to prevent diversion of flow. The licensee replied that the valves do not perform an active safety function and do not play a role in shutting down the reactor, maintaining the reactor in cold shutdown, or mitigating the consequences of an accident. This is acceptable.

Refueling Justification (RFJ)-23

Item RFJ-23 provides justification to extend the test frequency for the Category B RHR and Fuel Pool Cooling valves listed in the IST program. Each of these valves shall be full-stroke tested during each refueling outage.

The staff previously reviewed relief request VRR-09 for valves 1(2)-E11-V40, which requested exercise testing of the valves on a refueling outage frequency. The staff denied this relief request because the licensee did not demonstrate that the quarterly test frequency resulted in an unusual or undue burden on the licensee. These valves are now part of RFJ-23 that includes valves 1(2)-E11-V39, 1(2)-G41-F004, 1(2)-G41-F016, and 1(2)-G41-F036. The licensee should

ensure that it has an adequate basis for deferring testing of these valves to every refuel outage as required by the Code for impracticality. The adequacy of RFJ-23 is subject to NRC inspection.

Please contact me if you have any questions regarding this matter.

Sincerely,

/RA/

Allen G. Hansen, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-325 and 50-324

cc: See next page

ensure that it has an adequate basis for deferring testing of these valves to every refuel outage as required by the Code for impracticality. The adequacy of RFJ-23 is subject to NRC inspection.

Please contact me if you have any questions regarding this matter.

Sincerely,

/RA/

Allen G. Hansen, Project Manager, Section 2
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