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SERIAL: BSEP 97-0119

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324/LICENSE NOS. DPR-71 AND DPR-62
REQUEST FOR ENFORCEMENT DISCRETION
INSTRUMENTATION RESPONSE TIME TESTING

Gentlemen:

In accordance with the NRC's Enforcement Policy as published in NUREG-1600, "General Statement of Policy and Procedures for NRC Enforcement Actions," Carolina Power & Light (CP&L) Company requests that the NRC exercise enforcement discretion regarding compliance with the Technical Specifications for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2. This request is made to permit continued operation without completion of instrumentation response time testing, as currently defined in the Technical Specifications, for the Reactor Protection System (RPS), Emergency Core Cooling System (ECCS), and Isolation Actuation instrumentation. It was determined that these instruments are inoperable because instrument response time surveillance testing required by Technical Specifications 4.3.1.3, 4.3.2.3, and 4.3.3.3 has not been performed in accordance with the instrumentation response time testing definitions contained in Section 1.0 of the BSEP Technical Specifications.

A discussion of the circumstance surrounding this request, including technical justification, compensatory measures, safety evaluation, and evaluation of the potential impact on the public health and safety and the environment is enclosed. CP&L has determined that there is no safety significance associated with this issue and that there are no potential adverse consequences associated with the proposed enforcement discretion.

A letter notifying the NRC of the potential need for enforcement discretion was previously submitted on March 21, 1997 (Serial: BSEP 97-0117). Subsequently, a telephone conference was held with the NRC staff on the evening of March 21, 1997. The NRC staff verbally granted this request for enforcement discretion at 9:36 p.m. on March 21, 1997. The NRC Inspection Manual, Part 9900: Technical Guidance stipulates that a licensee's written request for enforcement discretion should be submitted within 24 hours following verbal approval of the enforcement discretion. This letter supersedes the March 21, 1997, letter and provides the necessary written request for enforcement discretion.

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Please refer any questions regarding this submittal to Mr. Keith Jury, Manager - Regulatory Affairs, at (910) 457-2783.

Sincerely,



William R. Campbell

WRM/wrm

Enclosures:

1. Basis for Enforcement Discretion Request
2. Marked Up Technical Specification Pages

pc (with enclosures):

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The Honorable J. A. Sanford
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ENCLOSURE 1

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2 NRC DOCKET NOS. 50-325 AND 50-324 OPERATING LICENSE NOS. DPR-71 AND DPR-62 REQUEST FOR ENFORCEMENT DISCRETION INSTRUMENTATION RESPONSE TIME TESTING

Summary:

In accordance with the NRC's Inspection Manual, Part 9900: Technical Guidance, Carolina Power & Light (CP&L) Company requests that the NRC exercise enforcement discretion regarding compliance with the Technical Specifications for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2. This request would permit continued operation without completion of instrumentation response time testing of the Reactor Protection System (RPS), Emergency Core Cooling System (ECCS), and Isolation Actuation Instrumentation. These instruments are considered inoperable because instrument response time surveillance testing required by Technical Specifications 4.3.1.3, 4.3.2.3, and 4.3.3.3 has not been performed in accordance with the instrumentation response time testing definitions contained in section 1.0 of the BSEP Technical Specifications. As a result of these circumstances, shutdown of both BSEP Unit No. 1 and BSEP Unit No. 2 in accordance with Technical Specifications is required.

A letter notifying the NRC of the potential need for enforcement discretion was previously submitted on March 21, 1997 (Serial: BSEP 97-0117). Subsequently, a telephone conference was held with the NRC staff on the evening of March 21, 1997. The NRC staff verbally granted this request for enforcement discretion at 9:36 p.m. on March 21, 1997. The NRC Inspection Manual, Part 9900: Technical Guidance stipulates that a licensee's written request for enforcement discretion should be submitted within 24 hours following verbal approval of the enforcement discretion. This letter supersedes the March 21, 1997, letter and provides the necessary written request for enforcement discretion.

1. Requirements For Which Discretion Is Requested:

Technical Specification Section 1.0 includes the following defined terms:

EMERGENCY CORE COOLING SYSTEM (ECCS) RESPONSE TIME

The EMERGENCY CORE COOLING SYSTEM (ECCS) RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ECCS actuation setpoint at the channel sensor until the ECCS equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays where applicable.

ISOLATION SYSTEM RESPONSE TIME

The ISOLATION SYSTEM RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its isolation actuation setpoint at the channel sensor until

the isolation valves travel to their required positions. Times shall include diesel generator starting and sequence loading delays where applicable.

REACTOR PROTECTION SYSTEM RESPONSE TIME

The REACTOR PROTECTION SYSTEM RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids.

Technical Specification 4.3.1.3 states the following:

The REACTOR PROTECTION SYSTEM RESPONSE TIME of each reactor trip function[#] shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function.

Neutron detectors are exempt from response time testing.

Technical Specification 4.3.2.3 states the following:

The ISOLATION SYSTEM RESPONSE TIME of each isolation function[#] shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific isolation function.

Radiation monitors are exempt from response time testing.

Technical Specification 4.3.3.3 states the following:

The ECCS RESPONSE TIME of each ECCS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months, where N is the total number of redundant channels in a specific ECCS function.

Technical Specification 4.0.3 states that performance of a Surveillance Requirement within the specified time interval constitutes compliance with OPERABILITY requirements for a Limiting Condition for Operation and associated ACTION statements unless otherwise required by the specification. If Surveillance Requirements have not been performed, the licensee must comply with the appropriate ACTION statements.

2. Circumstances Surrounding The Situation and Root Cause:

On March 21, 1997, the NRC notified CP&L of an issue documented in a letter sent to Washington Nuclear Power Unit 2 (WNP-2) on March 20, 1997, regarding compliance with the Technical Specification definition for instrumentation response time testing. For the issue

described by the NRC, verbatim compliance with the Technical Specification definition of response time testing for the affected instrumentation would require testing from the monitored parameter exceeding its setpoint at the sensor up to the actuating equipment. However, response time testing of some sensors, components, and systems has been eliminated through implementation of a BWR Owners' Group Licensing Topical Report, NEDO-32291-A, "System Analyses For The Elimination of Selected Response Time Testing Requirements." Using the guidance of NRC Generic Letter 93-08, "Relocation of Technical Specification Tables of Instrument Response Time Limits," CP&L has relocated these instrument tables from the Technical Specifications to the Updated Final Safety Analysis Report. This change was approved as Amendments 171 and 202 to the Operating Licenses for BSEP Unit No. 1 and BSEP Unit No. 2, respectively.

The NRC documented its review and acceptance of the BWR Owners' Group Licensing Topical Report NEDO-32291 in a letter dated December 28, 1994. While elimination of some response time testing activities (such as response time testing of some instrument sensors) has been technically accepted by the NRC staff if such testing is performed in accordance with the guidelines of the NEDO-32291-A report, licensees have not been seeking license amendments to clarify the response time testing definition contained in the Technical Specifications based on the NRC approval of revised response time testing methodology.

CP&L has reviewed this issue and determined that the issue is also applicable to BSEP Unit No. 1 and BSEP Unit No. 2. The root cause of this situation appears to be an oversight which occurred during the 10 CFR 50.59 review of the BWR Owners' Group revised response time verification methodology for implementation. CP&L has concluded that there is no unreviewed safety question based on the 10 CFR 50.59 evaluation that was prepared for the implementation of NEDO-32291-A.

CP&L requests that the NRC exercise enforcement discretion from the requirements of the applicable Technical Specifications for a sufficient period of time for the NRC staff to review and approve a license amendment application to incorporate the appropriate changes to clarify the response time testing requirements for RPS, ECCS, and isolation actuation instrumentation.

The need for prompt action is required because failure to satisfy the response time testing specified in Technical Specifications 4.3.1.3, 4.3.2.3, and 4.3.3.3 requires that the applicable systems be declared inoperable. This involves instruments for RPS, Isolation Actuation, and ECCS Actuation, and requires that both BSEP Unit No. 1 and BSEP Unit No. 2 be taken to cold shutdown.

3. Safety Basis For The Request:

Qualitative response time testing has been completed in accordance with NEDO-32291-A for those instruments for which enforcement discretion is being requested.

The equipment in question are sensors associated with the RPS, Isolation Actuation, and ECCS Actuation Instrumentation. The affected instrumentation has been tested in accordance with NEDO-32291-A. This provides assurance of equipment operability. These components are also subject to periodic functional testing by channel functional testing and logic system functional testing. No failure mechanism has been identified that results in response time degradation for these components. CP&L has determined that there is no impact on the BSEP Probabilistic Safety Assessment (PSA) core damage frequency estimate as a result of this condition.

CP&L believes that the RPS, Isolation Actuation, and ECCS Actuation Instrumentation are capable of performing their intended functions within designed response times and has verified response of these components using the alternate methodology in NEDO-32291-A. Based on the above, CP&L has determined that there is no safety significance and no potential adverse consequences associated with the proposed enforcement discretion.

4. No Unreviewed Safety Question or Significant Hazards Evaluation Involved:

The NRC has provided standards in 10 CFR 50.92 for determining whether a significant hazards consideration exists. A proposed license amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety. CP&L has reviewed this proposed enforcement discretion request and concluded that its adoption does not involve a significant hazards consideration. The basis for this determination follows.

- a. The proposed enforcement discretion does not involve a significant increase in the probability or consequences of an accident previously evaluated.

BWR Owners' Group Licensing Topical Report NEDO-32291-A demonstrates that quantitative response time testing is redundant to other Technical Specification requirements. Qualitative tests are sufficient to identify failure modes or degradations in instrument response time and ensure operation of the associated systems within acceptance limits. There are no known failure modes that can be detected by response time testing that cannot also be detected by other Technical Specification required tests.

Therefore, the requested enforcement discretion does not involve a significant increase in the probability or consequences of an accident previously evaluated.

- b. The proposed enforcement discretion would not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed enforcement discretion does not affect the capability of the associated systems to perform their intended function within the acceptance limits assumed in the plant safety analyses and required for successful mitigation of an initiating event. This does not change the way in which any plant systems are operated or create the possibility of a new or different kind of accident.

- c. The proposed enforcement discretion does not involve a significant reduction in a margin of safety.

The current Technical Specification response times are based on the maximum allowable values assumed in the plant safety analyses. These analyses conservatively establish the margin of safety. As described above, the reliance on an alternate methodology (i.e., provided in the NEDO-32291-A report) will not affect the capability of the associated systems to perform their intended function within the allowed response time used as the basis for the plant safety analyses.

Plant and system response to an initiating event will remain in compliance with the assumptions of the safety analyses; therefore, the margin of safety is not affected.

CP&L has also concluded that this request for enforcement discretion does not involve an unreviewed safety question based on the 10 CFR 50.59 evaluation that was prepared for the implementation of NEDO-32291-A.

5. Environmental Evaluation:

10 CFR 51.22(c)(9) provides criterion for and identification of licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment. A proposed amendment to an operating license for a facility requires no environmental assessment if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration, (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (3) result in an increase in individual or cumulative occupational radiation exposure.

CP&L has reviewed this enforcement discretion request and concluded that the proposed action meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of the amendment. The basis for this determination follows.

- a. The proposed enforcement discretion does not involve a significant hazards consideration, as shown in Item 4 above.
- b. The proposed enforcement discretion does not result in a significant change in the types or a significant increase in the amounts of any effluent that may be released offsite. The proposed enforcement discretion does not introduce any new equipment nor does it require any existing equipment or systems to perform a different type of function than they are presently designed to perform. The proposed enforcement discretion does not alter the function of existing equipment and will ensure that the consequences of any previously evaluated accident do not increase. Therefore, CP&L has concluded that there will not be a significant increase in the types or amounts of any effluent that may be released offsite and, as such, does not involve irreversible environmental consequences beyond those already associated with normal operation.
- c. These amendments do not result in an increase in individual or cumulative occupational radiation exposure.

6. Compensatory Measures:

Instrumentation response time testing has been conducted within the required surveillance frequencies for the instrument functions listed in BSEP Technical Specification Tables 3.3.1-1, 3.3.2-1, and 3.3.3-1. The current response time testing fully complies with the guidelines contained in the BWR Owners' Group Licensing Topical Report NEDO-32291-A. As previously noted, this report has been reviewed and accepted by the NRC staff in a letter dated December 28, 1994. Therefore, continued qualitative testing will provide an adequate level of testing to verify the proper function and response of the affected components. Therefore, no compensatory measures are needed in conjunction with the request for enforcement discretion.

7. Justification For Duration of the Non-Compliance

This non-compliance results from a process issue. The affected instrumentation has been verified functional in accordance with either the qualitative guidance contained in the BWR Owners' Group Licensing Topical Report NEDO-32291-A.

The basis for NEDO-32291-A methodology relies, in part, on the reliability, known failure modes, and the performance of other surveillance tests for the instrumentation. Other surveillance requirements that support operability include channel functional tests, channel calibration tests, and logic system functional tests. These surveillances are up-to-date and thereby provide an independent verification that instrument channel and logic system operability exists.

CP&L has determined that the issues identified by the NRC staff are applicable to BSEP Unit No. 1 and BSEP Unit No. 2. We request that the NRC exercise enforcement discretion from the requirements of Technical Specifications for a sufficient period of time for the NRC staff to review and approve a license amendment application to incorporate the appropriate changes to clarify the response time testing requirements for RPS, ECCS, and isolation actuation instrumentation.

8. Plant Nuclear Safety Committee Review:

This request for enforcement discretion and its basis have been reviewed by the BSEP Plant Nuclear Safety Committee (PNSC). The PNSC agrees that this request is in the best interest of nuclear safety.

9. Enforcement Discretion Criteria For The Plant Conditions:

Both BSEP Unit No. 1 and BSEP Unit No. 2 are currently operating. Granting of this enforcement discretion is requested to avoid an unnecessary shutdown of both BSEP units as a result of forcing compliance with the Technical Specifications. Avoidance of such a shutdown would minimize potential safety consequences and operational risks associated with this shutdown.

10. Technical Specification Pages For A Follow-up Amendment Request

Enclosure 2 provides marked up pages for the Technical Specifications. The NRC Inspection Manual, Part 9900: Technical Guidance stipulates that a licensee's license amendment request must be submitted with 48 hours following submittal of the request for enforcement discretion. Therefore, CP&L will submit the follow-up license amendment request within 48 hours of the written enforcement discretion request.

11. Adoption of Line-Item Improvements Would Not Have Obviated The Need

No line item improvement exists which would have obviated the need for this request for enforcement discretion. Implementation of the improved Technical Specifications would not have obviated the need for this request for enforcement discretion.

12. Additional Information Necessary Before A NRC Staff Decision

CP&L knows of no additional information that is necessary for processing of this request for enforcement discretion.