

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT LEAKAGE

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR Part 50:

- a. ~~(Three) Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10 month intervals during shutdown at a pressure not less than P_a , 49.6 psig, during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection;~~
- b. If any periodic Type A test fails to meet $0.75 L_a$, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet $0.75 L_a$, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet $0.75 L_a$ at which time the above test schedule may be resumed;
- c. The accuracy of each Type A test shall be verified by a supplemental test which:
 - 1) Confirms the accuracy of the test by verifying that the supplemental test result, L_c , is in accordance with the following equation:

$$|L_c - (L_{am} + L_0)| \leq 0.25 L_a$$

where L_{am} is the measured Type A test leakage and L_0 is the superimposed leak;

- 2) Has a duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test; and
- 3) Requires that the rate at which gas is injected into the containment or bled from the containment during the supplemental test is between $0.75 L_a$ and $1.25 L_a$.

III. Retype of Proposed Changes

See attached retype of proposed changes to the Technical Specifications. The attached retype reflects the currently issued version of the Technical Specifications. Pending Technical Specification changes or Technical Specification changes issued subsequent to this submittal are not reflected in the enclosed retype. The enclosed retype should be checked for continuity with the Technical Specifications prior to issuance.

Revision bars are provided in the right hand margin to designate a change in the text. No revision bars are utilized when the page is changed solely to accommodate the shifting of text due to additions or deletions.

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 - 1) Confirms the accuracy of the test by verifying that the supplemental test result, L_c , is in accordance with the following equation:

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where L_{am} is the measured Type A test leakage and L_o is the superimposed leak;

- 2) Has a duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test; and
- 3) Requires that the rate at which gas is injected into the containment or bled from the containment during the supplemental test is between $0.75 L_a$ and $1.25 L_a$.

IV. Safety Evaluation of License Amendment Request 91-07 Proposed Changes

Seabrook Station Technical Specification Surveillance Requirement 4.6.1.2 provides the test schedule for demonstrating containment integrity. Specifically, Surveillance Requirement 4.6.1.2.a requires that three Type A Integrated Containment Leak Rate Tests be conducted at 40 ± 10 month intervals during shutdown during each 10-year service period. This Surveillance Requirement also states that each third Type A test in a 10-year service period shall be conducted during the 10-year plant inservice inspection shutdown.

License Amendment Request 91-07 proposes to change Technical Specification Surveillance Requirement 4.6.1.2.a to maintain the existing Type A testing interval of 40 ± 10 months but eliminate the requirement to perform three Type A tests in each 10-year service period. This amendment request will also eliminate the requirement that each third Type A Integrated Containment Leak Rate Test in a 10-year service period be performed coincident with the 10-year plant inservice inspection shutdown. In accordance with the ASME Code [IWA-2400(b)], the 10-year plant inservice inspection period starts when commercial service begins. Seabrook Station's first and second Type A Integrated Containment Leak Rate Tests were conducted in March 1986 and November 1989, respectively. Both of these tests were performed prior to commercial service, which occurred in August 1990. Seabrook Station's third Type A Integrated Containment Leak Rate Test will be performed during the second refueling outage, which is scheduled to begin in September 1992. This third test will not coincide with the 10-year plant inservice inspection shutdown, which is scheduled for the 1999-2000 refueling outage. This will be inconsistent with the current Technical Specification surveillance requirement which does not distinguish between pre-operational and periodic Type A tests. The proposed Technical Specification changes will maintain the required Type A testing frequency of 40 ± 10 months in addition to all other requirements of the test. The Type A Integrated Containment Leak Rate Tests conducted at Seabrook Station will therefore continue to provide adequate assurance that the containment leak-tight integrity can be verified throughout the service lifetime and that the leakage rates will be periodically checked during service on a timely basis to maintain leakage within the specified limits. Maintaining containment leakage within these limits provides reasonable assurance that, in the event of a radioactivity release within the containment, the loss of containment atmosphere through leak paths will not be in excess of the Technical Specification limits. In summary, since the containment testing and testing frequency requirements are not affected by the proposed license amendment, there is no adverse impact on containment integrity.

The proposed decoupling of the third Type A Integrated Containment Leak Rate Test in each 10-year service period from the 10-year plant inservice inspection has no adverse safety consequences. The 10-year plant inservice inspection is not related to the Type A testing to demonstrate the integrity of the containment pressure boundary. The purpose of 10 CFR 50 Appendix J, and the corresponding Technical Specification testing requirements, is to ensure that leakage through the primary reactor containment does not exceed allowable leakage rate values. The purpose of the inservice inspection program is to ensure that structural integrity of Class 1, 2, and 3 components is maintained in accordance with ASME Code requirements. There is no commonality between these two activities such that it is necessary to perform each third Type A test during the 10-year plant inservice inspection shutdown. Concurrency of these two activities does not provide any further assurance of containment integrity above that provided by the testing interval of 40 ± 10 months. The

proposed decoupling has no adverse safety consequences because the requirements on containment integrity in the Technical Specifications, and on structural integrity of Class 1, 2, and 3 components in the ASME Code are not being changed by the proposed license amendment. Based on the foregoing, License Amendment Request 91-07 does not reduce the level of protection available to ensure the health and safety of the public.

V. Determination of Significant Hazards for License Amendment Request 91-07 Proposed Changes

1. The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

License Amendment Request 91-07 proposes to change Technical Specification Surveillance Requirement 4.6.1.2.a to maintain the existing Type A testing interval of 40 ± 10 months but eliminate the requirement to perform three Type A tests in each 10-year service period. This change will also eliminate the requirement that each third Type A Integrated Containment Leak Rate Test in a 10-year service period be performed coincident with the 10-year plant inservice inspection shutdown. This change does not modify the Type A test frequency of 40 ± 10 months, nor does it change any parameters or requirements of the test. This change has no impact on accident probability or consequences since it ensures that containment leakage is within Technical Specification limits by requiring the Type A tests be conducted at the specified frequency.

2. The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

As stated above, License Amendment Request 91-07 proposes to remove the requirement that three Type A Integrated Containment Leak Rate Tests be performed in each 10-year service period and that each third Type A test in a 10-year period be performed in conjunction with the 10-year plant inservice inspection shutdown. This change does not change the Type A test frequency of 40 ± 10 months, nor does it change any parameters or requirements of the test. Since the containment testing and testing frequency requirements are not affected by this Technical Specification change, there is no impact on containment integrity.

The Type A Integrated Containment Leak Rate Testing frequency of 40 ± 10 months is in accordance with the requirements of 10 CFR 50, Appendix J, and is sufficient to ensure containment integrity. The purpose of the 10-year plant inservice inspection is to ensure that the structural integrity of Class 1, 2, and 3 components is maintained in accordance with ASME Code requirements. The proposed separation of the third Type A test in each 10-year service period from the 10-year plant inservice inspection has no safety consequences because the individual requirements for containment integrity and structural integrity of ASME Code Class 1, 2, and 3 components are not being changed. Based on the foregoing, eliminating the requirement to perform three Type A tests in a 10-year service period and decoupling the third Type A test in a 10-year interval from the 10-year plant inservice inspection shutdown will not create the possibility of a new or different kind of accident.

3. The proposed changes do not result in a significant reduction in the margin of safety.

Operation of the facility in accordance with the proposed Technical Specification change will not reduce the margin of safety. The Type A Containment Integrated Leak Rate Tests will still be performed in the same manner and at the same frequency of 40 ± 10 months prescribed by the Technical Specifications. Based on this, the margin of safety for the containment is not affected by the proposed Technical Specification change.

VI. Proposed Schedule for License Amendment Issuance and Effectiveness

New Hampshire Yankee requests NRC review of License Amendment Request 91-07 and issuance of a license amendment having immediate effectiveness by September 9, 1992. Seabrook Station's third Type A Integrated Containment Leak Rate Test will be performed during the second refueling outage, which is currently scheduled to begin in September 1992. The proposed license amendment will allow continued compliance with Technical Specification Surveillance Requirement 4.6.1.2.a.

The Technical Specification changes proposed herein will continue to ensure safe operation by maintaining containment integrity.

VII. Environmental Impact Assessment

New Hampshire Yankee has reviewed the proposed license amendment against the criteria of 10 CFR 51.22 for environmental considerations. The proposed changes do not involve a significant hazards consideration, nor increase the types and amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, NHY concludes that the proposed change meets the criteria delineated in 10 CFR 51.22(c)(9) for a categorical exclusion from the requirements for an Environmental Impact Statement.

VIII. Supporting Documentation

None.

New Hampshire Yankee
March 23, 1992

ENCLOSURE 2 TO NYN-92034

REQUEST FOR EXEMPTION FROM 10 CFR 50, APPENDIX J, SECTION III.D.1(a)

I. Introduction

The following provides information in support of a request for an exemption pursuant to 10 CFR 50.12, "Specific Exemptions," from a requirement of 10 CFR 50, Appendix J, Section III, entitled "Leakage Testing Requirements," for Seabrook Station. Specifically, an exemption is requested from a portion of the requirement of 10 CFR 50, Appendix J, Section III.D.1(a), "Periodic Retest Schedule," which establishes the specific schedule requirements for Type A Integrated Containment Leak Rate Tests. 10 CFR 50, Appendix J, Section III.D.1(a) states:

"After the preoperational leakage rate tests, a set of three Type A tests shall be performed, at approximately equal intervals during each 10-year service period. The third test of each set shall be conducted when the plant is shutdown for the 10-year plant inservice inspections." [Footnote omitted].

New Hampshire Yankee requests that it be authorized to perform Type A Integrated Containment Leak Rate Tests at 40 ± 10 month intervals. NHY further requests that this proposed schedule replace the requirement that a set of three Type A tests be conducted in a 10-year service period, and that each third test in a 10-year service period be conducted during the 10-year plant inservice inspection shutdown. Justification for this exemption request is based upon an evaluation of the merits and circumstances of the request against the individual criteria of 10 CFR 50.12 as discussed below.

II. Justification for Request for Exemption

A. 10 CFR 50.12(a) Criteria

The Commission may grant exemptions from the requirements of the regulations in 10 CFR Part 50. Such exemptions must be authorized by law, must not present an undue risk to the public health and safety, and must be consistent with the common defense and security.

Evaluation

1. The requested exemption and the activities which would be permitted under it are authorized by law. Public Service Company of New Hampshire (PSNH), acting for itself and as agent and representative of eleven other utilities, is currently authorized to operate Seabrook Station pursuant to License No. NPF-86, which was issued in accordance with the Atomic Energy Act as amended. New Hampshire Yankee (NYH) is the Division of PSNH responsible for the operation of Seabrook Station. If the requested exemption is granted, no other prohibition of law would exist in this regard to preclude licensed activities.
2. The requested exemption will not present an undue risk to the public health and safety. Seabrook Station Technical Specification Surveillance Requirement 4.6.1.2 provides the test schedule for demonstrating containment integrity. Specifically, Surveillance Requirement 4.6.1.2.a requires Type A Integrated Containment Leak Rate Testing at 40 ± 10 month intervals with each third

Type A test in a 10-year service period being conducted during the 10-year plant inservice inspection shutdown. This exemption request and associated License Amendment Request 91-07, propose to maintain the 40 ± 10 month testing interval but eliminate the requirement to perform three Type A tests in each 10-year service period. This exemption request also proposes to decouple the third Type A test in each 10-year service period from the 10-year plant inservice inspection shutdown. This exemption request and the proposed Seabrook Station Technical Specification changes will maintain the required Type A testing frequency of 40 ± 10 months in addition to all other requirements of the test. The 40 ± 10 month testing interval meets the intent of 10 CFR 50, Appendix J, Section III.D.1(a) criterion that three Type A tests be performed at approximately equal intervals in a ten year service period. Furthermore, Seabrook Station will commence operation on an 18 month cycle with Cycle 3. Therefore, the Type A Integrated Containment Leak Rate Tests will be performed approximately every 36 months, which is more frequent than the 40 ± 10 month testing interval. This will ensure that at least three Type A tests will be conducted in a given 10-year service period. Since the containment testing and testing frequency requirements are not affected by this exemption request, there is no impact on containment integrity.

The proposed decoupling of each third Type A Integrated Containment Leak Rate Test in each 10-year service period from the 10-year plant inservice inspection has no adverse safety consequences. The 10-year plant inservice inspection is not related to the Type A testing to demonstrate the integrity of the containment pressure boundary. The purpose of the 10 CFR 50 Appendix J, Section III.D.1(a) testing requirements is to ensure that leakage through the primary reactor containment does not exceed allowable leakage rate values. The purpose of the inservice inspection program is to ensure that structural integrity of Class 1, 2, and 3 components is maintained in accordance with ASME Code requirements. Therefore, the proposed decoupling has no adverse safety consequences because the requirements for containment integrity in the Technical Specifications, and on structural integrity of Class 1, 2, and 3 components in the ASME Code are not being changed by this exemption request. Based on the foregoing, this exemption request does not reduce the level of protection available to ensure the health and safety of the public.

3. The requested exemption will not impact the common defense and security.

B. 10 CFR 50.12(a)(2) Special Circumstances

- (i) Application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission.

Evaluation: The 10 CFR 50 Appendix J, Section III.D.1(a) testing requirements conflict when applied to testing at Seabrook Station. 10 CFR 50 Appendix J, Section III.D.1(a) requires that three Type A tests be conducted at approximately equal intervals during each 10-year service period. 10 CFR 50, Appendix J also requires that the third Type A test in each 10-year service period be conducted when the plant is shutdown for the 10-year plant inservice

inspection. A conflict between these two requirements has been caused by the extended licensing duration of Seabrook Station.

Seabrook Station's pre-operational Type A test was conducted in 1986. Periodic Type A tests are conducted at 40 ± 10 month intervals in accordance with the Seabrook Station Technical Specifications and the frequency requirements of 10 CFR 50 Appendix J, Section III.D.1(a). Based on the 40 ± 10 month interval, the first periodic Type A test was conducted at Seabrook Station in 1989. Both the preoperational and first periodic tests were performed prior to the start of commercial service, which occurred in August of 1990. In accordance with the ASME Code [IWA-2400(b)], the 10-year plant inservice inspection period starts when commercial service begins. Seabrook Station's second periodic Type A test will be conducted in 1992 during the second refueling outage, and the third periodic Type A test will be conducted in 1995. The third periodic test will not coincide with the 10-year plant inservice inspection shutdown, which is currently scheduled for the years 1999 - 2000. This will be inconsistent with the requirement to perform each third Type A test in a 10-year service period during the 10-year plant inservice inspection shutdown. Based on the foregoing, the 10 CFR 50, Appendix J requirement to perform three Type A tests at approximately equal intervals during each 10-year service period is in conflict with the Appendix J requirement to perform each third Type A test in a 10-year service period during the 10-year plant inservice inspection shutdown when applied to Seabrook Station.

- (ii) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule.

Evaluation: Application of the 10 CFR 50 Appendix J, Section III.D.1(a) Type A testing schedule requirements would not serve the underlying purpose of performing Type A Integrated Containment Leak Rate Tests. The purpose of the 10 CFR 50 Appendix J, Section III.D.1(a) Type A testing requirements is to ensure that leakage through the primary reactor containment does not exceed allowable leakage rate values. NYH's proposed schedule to perform Type A tests at 40 ± 10 month intervals will ensure that primary reactor containment leakage does not exceed allowable leakage rate values. The proposed testing schedule fulfills the scheduling intent of 10 CFR 50, Appendix J. Specifically, the 40 ± 10 month testing interval is the same as the Appendix J requirement to perform three Type A tests at approximately equal intervals in a 10-year service period.

The proposed decoupling of each third Type A test in each 10-year service period from the 10-year plant inservice inspection would not affect the underlying purpose of performing Type A tests. The 10-year plant inservice inspection is not related to the Type A testing to demonstrate the integrity of the containment pressure boundary. As described above, the purpose of the 10 CFR 50 Appendix J, Section III.D.1(a) testing requirements is to ensure that leakage through the primary reactor containment does not exceed allowable

leakage rate values. The purpose of the inservice inspection program is to ensure that structural integrity of Class 1, 2, and 3 components is maintained in accordance with ASME Code requirements. There is no commonality between these two activities such that it is necessary to perform each third Type A test during the 10-year plant inservice inspection shutdown. Concurrence of these two activities does not provide any further assurance of containment integrity above that provided by the proposed testing interval of 40 ± 10 months.

- (iii) Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated.

Evaluation: As described in (i) above, the extended licensing duration of Seabrook Station caused scheduling of periodic Type A tests that precludes the coincidence of the each third Type A test in a 10-year service period and the 10-year plant inservice inspections. Performing an additional out-of-sequence Type A test coincident with the first 10-year plant inservice inspection would provide no additional assurance of containment integrity. Furthermore, an additional Type A test would involve a significant monetary expenditure. Notwithstanding this, conducting an additional out-of-sequence Type A test would nonetheless be contrary to the existing 10 CFR 50, Appendix J testing schedule requirements, since this additional test would not be the third Type A test.

- (iv) The exemption would result in benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption.

Evaluation: There is no decrease in safety associated with granting NHY the requested exemption. NHY proposes to perform Type A tests at 40 ± 10 month intervals independent of a 10-year service period and the 10-year plant inservice inspection. The proposed testing schedule meets the intent of 10 CFR 50, Appendix J, which requires the conduct of three Type A tests at approximately equal intervals in a 10-year service period. Additionally, as described above, the proposed decoupling of each third Type A test from the 10-year plant inservice inspections will not decrease safety.

- (v) The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation.

Evaluation: The requested exemption seeks permanent relief from the aforementioned testing schedule requirements contained in 10 CFR 50, Appendix J. NHY proposes that all Type A tests at Seabrook Station be performed at intervals of 40 ± 10 months.

- (vi) There is present any other material circumstances not considered when the regulation was adopted for which it would be in the public interest to grant an exemption.

Evaluation: NHY has not identified any other material circumstance pertinent to this exemption request.