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Vice President
Brunswick Nuclear Plant

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U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

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 LICENSE AMENDMENTS - REVISION OF SURVEILLANCE
FREQUENCY AND ACTION COMPLETION TIME FOR SUPPRESSION CHAMBER-
TO-DRYWELL VACUUM BREAKER STATUS

Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Parts 50.90 and 2.101, Carolina Power & Light (CP&L) Company is requesting a revision to the Technical Specifications for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2. The proposed license amendments revise, from 2 hours to 6 hours, the time period in Surveillance Requirement 3.6.1.6.1 for verifying each suppression chamber-to-drywell vacuum breaker is closed after any discharge of steam to the suppression chamber from any source. In conjunction with this change, the Completion Time associated with Required Action B.1, for closing an open vacuum breaker, is being revised from 8 hours to 4 hours.

Due to a position indication problem associated with BSEP, Unit 2 vacuum breaker 2-CAC-X18C, CP&L requests issuance of the proposed license amendments by August 1, 2001. The position indication problem is requiring routine use of the approved alternate method for verifying vacuum breaker closure (i.e., a differential pressure test). The inability to complete this differential pressure test within 2 hours following admission of steam to the suppression chamber (e.g., during required High Pressure Coolant Injection and Reactor Core Isolation Cooling system testing) results in entries into Condition B of Specification 3.6.1.6. Alternatively, attempting to complete testing within 2 hours poses an undue burden on Operations personnel. To support implementation of the Technical Specification changes associated with these proposed license amendments, CP&L requests an implementation period of 30 days following issuance of the license amendments.

Marked-up Bases pages for the proposed BSEP, Unit 1 license amendment are included in Enclosure 9. These pages are provided for information only and do not require issuance by the NRC.

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A001

In accordance with 10 CFR 50.91(b), CP&L is providing a copy of the license amendment application to Mr. Mel Fry of the State of North Carolina. In accordance with 10 CFR 50.4(b)(1), CP&L is providing a copy of the license amendment application to the NRC Region II Office and the BSEP Resident Inspector.

Please refer any questions regarding this submittal to Mr. David C. DiCello, Manager - Regulatory Affairs, at (910) 457-2235.

Sincerely,


John S. Keenan

WRM/wrm

Enclosures:

1. Basis For Change Request
2. 10 CFR 50.92 Evaluation
3. Environmental Considerations
4. Page Change Instructions
5. Typed Technical Specification Pages - Unit 1
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9. Marked-up Technical Specification Bases Pages - Unit 1 (For Information Only)

John S. Keenan, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief; and the sources of his information are officers, employees, and agents of Carolina Power & Light Company.


Notary (Seal)

My commission expires: 8/29/04

cc (with enclosures):

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ENCLOSURE 1

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 LICENSE AMENDMENTS - REVISION OF SURVEILLANCE
 FREQUENCY AND ACTION COMPLETION TIME FOR SUPPRESSION CHAMBER-TO-
 DRYWELL VACUUM BREAKER STATUS

Basis For Change Request

Summary of Proposed Changes

In accordance with the Code of Federal Regulations, Title 10, Parts 50.90 and 2.101, Carolina Power & Light (CP&L) Company is requesting a revision to the Technical Specifications for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2. This license amendment application revises Surveillance Requirement 3.6.1.6.1, which requires verification that each suppression chamber-to-drywell vacuum breaker is closed. Presently, Surveillance Requirement 3.6.1.6.1 requires this verification be completed within 2 hours following the discharge of steam to the suppression chamber. The time for completing this verification is being revised from 2 hours to 6 hours. Presently, if Surveillance Requirement 3.6.1.6.1 cannot be completed within 2 hours, Required Action B.1 for Technical Specification 3.6.1.6 must be followed and the affected vacuum breaker declared inoperable until the surveillance is successfully completed. Required Action B requires closure of the inoperable vacuum breaker within 8 hours; otherwise, the unit must be placed in MODE 3 within 12 hours and MODE 4 within 36 hours. In conjunction with the change to Surveillance Requirement 3.6.1.6.1, the Completion Time for Required Action B.1 is being revised from 8 hours to 4 hours.

Current Requirements

Surveillance Requirement 3.6.1.6.1 states:

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.1.6.1 -----NOTE----- Not required to be met for vacuum breakers that are open during Surveillances. ----- Verify each vacuum breaker is closed.	14 days <u>AND</u> Within 2 hours after any discharge of steam to the suppression chamber from any source.

The ACTION for Condition B states:

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One suppression chamber-to-drywell vacuum breaker not closed.	B.1 Close the open vacuum breaker.	8 hours

Safety Function

The safety functions of the suppression chamber-to-drywell vacuum breakers are to relieve vacuum in the drywell and to remain closed, except when the vacuum breakers are performing their intended design function, in order to ensure that no excessive bypass leakage occurs from the drywell to the suppression chamber. Each BSEP unit is equipped with ten vacuum breakers located on the vent header between the drywell and the suppression chamber.

These vacuum breakers allow flow from the suppression chamber atmosphere to the drywell when the drywell is at a negative pressure with respect to the suppression chamber. As noted above, the safety functions include a requirement that the vacuum breakers remain closed, except when the vacuum breakers are performing their intended design function, in order to ensure that no excessive bypass leakage occurs from the drywell to the suppression chamber. With a vacuum breaker not closed, communication between the drywell and suppression chamber airspaces could occur and, if a loss-of-coolant accident (LOCA) were to occur, there would be the potential for primary containment overpressurization due steam leakage from the drywell to the suppression chamber without quenching.

Vacuum Breaker Design

Each suppression chamber-to-drywell vacuum breaker is a self-actuating valve, similar to a check valve, which can be remotely operated for testing purposes. A photograph of a BSEP vacuum breaker is provided in Attachment 1.

Each vacuum breaker is equipped with redundant position switches for the open and closed position. Eight Unit 1 vacuum breakers are equipped with mechanical switches for the closed position; two Unit 1 vacuum breakers have one mechanical and one magnetic switch for the closed position. Unit 1 has mechanical switches for all open position indications. The Unit 2 vacuum breakers are equipped with magnetic position switches for the closed position indications and mechanical switches for the open position indications. These position switches only provide indication of whether each vacuum breaker is open or closed; there is no indication of intermediate position for the vacuum breakers. For each vacuum breaker, there is only one open position and one closed position indicating light in the Control Room.

Historically, the BSEP suppression chamber-to-drywell vacuum breakers have proven to be very reliable and provided consistent, acceptable performance during surveillance testing. However, instances of problems with vacuum breaker position indication have occurred. The position indication switches for the vacuum breakers are located inside the suppression chamber. As required by Technical Specification 3.6.3.1, the suppression chamber and drywell airspaces are inerted with nitrogen to maintain oxygen concentration less than 4.0 percent during power operation; therefore, the position indication switches are inaccessible during power operation for troubleshooting, adjustment, or replacement.

Surveillance Requirements

Surveillance Requirement 3.6.1.6.1 requires verification, every 14 days, that each suppression chamber-to-drywell vacuum breaker is closed. In addition, because the discharge of steam to the suppression chamber may result in pressurization of the suppression chamber and opening of one or more of the vacuum breakers, each vacuum breaker must be verified to be closed within 2 hours after any discharge of steam to the suppression chamber. The verification that each vacuum breaker is closed is normally accomplished using the Control Room position indication lights. However, if a vacuum breaker position indication is not available, an alternate method for verifying that the vacuum breaker is closed is available. The alternate method involves verifying that the differential pressure between the suppression chamber and drywell is maintained greater than 0.5 times the initial differential pressure for 1 hour without nitrogen makeup.

Performance of the differential pressure test requires injection of nitrogen vapor into the drywell. Because nitrogen is stored in liquid form, use of an auxiliary boiler is required to bring the liquid nitrogen to a vapor state. Once the auxiliary boiler and vaporization station are ready, drywell pressure is increased to 1.0 psig. Note that a reactor scram will occur if drywell pressure reaches 1.8 psig. The suppression chamber is then aligned to purge such that it will remain at atmospheric pressure. Once the drywell has been pressurized to and stabilizes at 1.0 psig, drywell pressure is monitored for 1 hour. If the differential pressure between the suppression chamber and drywell is maintained greater than 0.5 times the initial differential pressure for 1 hour without nitrogen makeup, the differential pressure test is considered successful. Due to the complexity of performing the differential pressure test, it cannot routinely be completed within 2 hours. The plant procedure is lengthy, requires close communications between the control room and plant operators, contains many valve/switch manipulations (i.e., approximately 50), contains a 1 hour holding period, and has the potential to cause a plant scram if performed incorrectly. The desire to meet the 2 hour requirement places an undue burden on Operations personnel. Allowing 6 hours will provide sufficient time to perform the test in a safe, deliberate manner and assure timely verification of vacuum breaker closure.

Basis

Technical Specification 3.6.1.6 contains two Surveillance Requirements that require actions following discharge of steam to the suppression chamber (e.g., typically following the required quarterly test for both the Reactor Core Isolation Cooling (RCIC) system and the High Pressure Coolant Injection (HPCI) system). Surveillance Requirement 3.6.1.6.1 requires verification that

each vacuum breaker is closed at least every 14 days, and within 2 hours following any discharge of steam to the suppression chamber from any source. Surveillance Requirement 3.6.1.6.2 requires performance of a functional test of each vacuum breaker every 31 days, and within 12 hours following any discharge of steam to the suppression chamber.

When performing the surveillance to verify each vacuum breaker is closed, the expected result is the verification that the component is indeed closed. However, if this surveillance result is not obtained, Condition B of Technical Specification 3.6.1.6 limits the amount time allowed to close and verify closure of the vacuum breaker. Current Technical Specifications allow up to 10 hours to close an open vacuum breaker (i.e., 2 hours to perform Surveillance Requirement 3.6.1.6.1 and, if necessary, 8 hours to close the vacuum breaker). Because of increased burden on Operations personnel to complete the differential pressure test within 2 hours following conclusion of steam addition to the suppression chamber, and to avoid unnecessary entries into Condition B of Specification 3.6.1.6, CP&L is requesting these proposed license amendments. The proposed changes maintain the overall 10 hour limit by reducing the Completion Time for Condition B time from 8 hours to 4 hours while increasing the Surveillance Requirement 3.6.1.6.1 limit from 2 hours to 6 hours.

The vacuum breakers function to mitigate the consequences of certain design basis accidents by relieving vacuum in the drywell following a LOCA and to remain closed, when not relieving vacuum, to ensure that no excessive bypass leakage occurs from the drywell to the suppression chamber. The proposed changes will not affect the ability of the suppression chamber-to-drywell vacuum breakers to perform their safety functions. The vacuum breakers do not perform a safety function that initiates, or alters initiation of, an accident previously evaluated. As a result, the proposed changes will not increase the probability of an accident previously evaluated, will not increase the consequences of an accident previously evaluated, and will not change overall plant risk.

Requested Schedule for Review

CP&L is requesting approval of this license amendment application by August 1, 2001, due to a position indication problem associated with BSEP, Unit 2 vacuum breaker 2-CAC-X18C. On May 4, 2001, the closed indication for vacuum breaker 2-CAC-X18C was lost. In order to verify closure of the vacuum breaker, the approved alternate method for verifying vacuum breaker closure (i.e., a differential pressure test) was performed. The test verified that the vacuum breaker was closed.

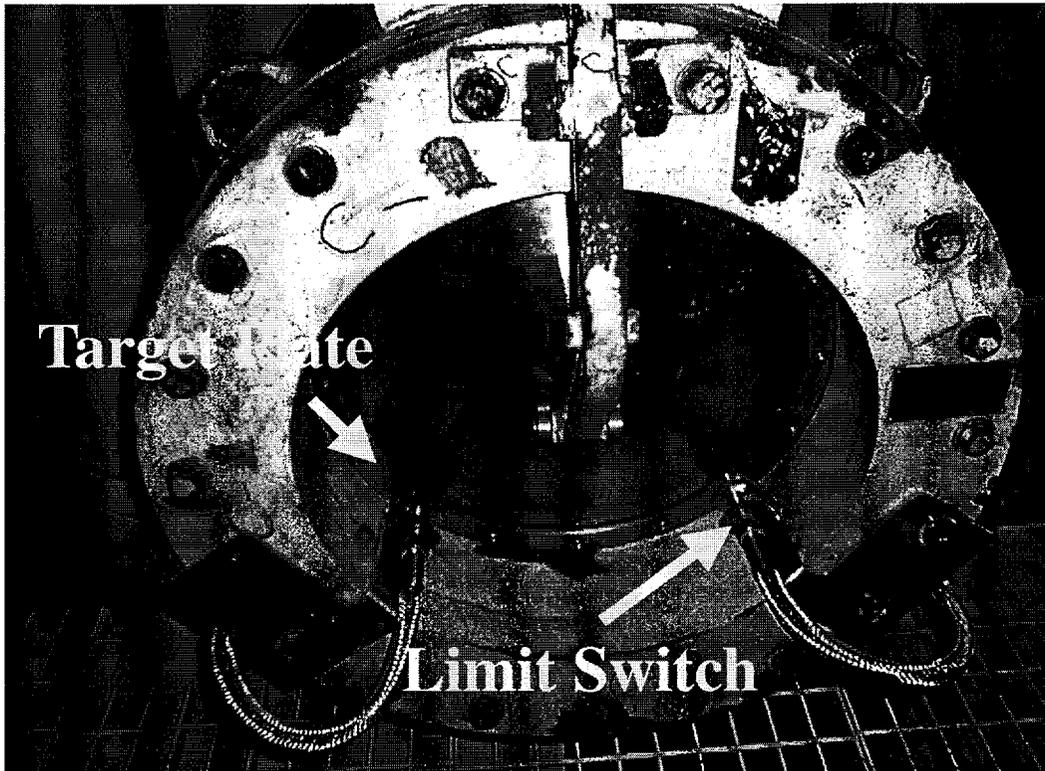
The position indication problem is requiring routine use of the differential pressure test. Since loss of the closed position indication, four additional differential pressure tests have been performed. Each test has successfully verified that vacuum breaker 2-CAC-X18C is closed. Therefore, CP&L has concluded that only a closed position indication problem exists for vacuum breaker 2-CAC-X18C (i.e., the closed position indication is inoperable), and that the vacuum breaker is operable.

The inability to complete differential pressure tests within 2 hours following admission of steam to the suppression chamber (e.g., during required HPCI and RCIC system testing) results in

repeated entries into Condition B of Specification 3.6.1.6. Alternatively, attempting to complete testing within 2 hours poses an undue burden on Operation personnel. Therefore, to relieve Operations personnel of this undue burden, review of this license amendment application within 60 days is being requested.

ATTACHMENT 1

Suppression Chamber-to-Drywell Vacuum Breaker (Unit 2)



ENCLOSURE 2

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 LICENSE AMENDMENTS - REVISION OF SURVEILLANCE
FREQUENCY AND ACTION COMPLETION TIME FOR SUPPRESSION CHAMBER-TO-
DRYWELL VACUUM BREAKER STATUS

10 CFR 50.92 Evaluation

Carolina Power & Light (CP&L) Company is requesting license amendments for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2, to revise, from 2 hours to 6 hours, the time period in Surveillance Requirement 3.6.1.6.1 for verifying each suppression chamber-to-drywell vacuum breaker is closed after any discharge of steam to the suppression chamber from any source. Based on this change, the Completion Time in Condition B for closing an open vacuum breaker is being revised from 8 hours to 4 hours. CP&L has concluded that the proposed changes to the Technical Specifications for BSEP, Units 1 and 2, do not involve a Significant Hazards Consideration. In support of the No Significant Hazards determination, an evaluation of each of the three (3) standards set forth in 10 CFR 50.92 is provided below.

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

The proposed changes provide additional time to verify that each vacuum breaker is closed and reduce the time allowed for closing an open vacuum breaker. The safety functions of the suppression chamber-to-drywell vacuum breaker valves are to relieve vacuum in the drywell following a postulated loss-of-coolant accident and to remain closed, except when the vacuum breakers are performing their intended design function, in order to ensure that no excessive bypass leakage occurs from the drywell to the suppression chamber. With a vacuum breaker not closed, communication between the drywell and suppression chamber airspaces could occur and, if a loss-of-coolant accident were to occur, there would be the potential for primary containment overpressurization due steam leakage from the drywell to the suppression chamber without quenching. The vacuum breakers do not perform a safety function that initiates, or alters initiation of, an accident previously evaluated. Rather, the vacuum breakers function to mitigate the consequences of certain design basis accidents. Therefore, the proposed changes do not involve an increase in the probability of an accident previously evaluated or the method of performing their safety functions.

As noted above, the vacuum breakers function to mitigate the consequences of certain design basis accidents. The proposed changes to the Surveillance Requirement and Completion Time provide additional time to verify that each vacuum breaker is closed and reduce the time allowed for closing an open vacuum breaker; however, the proposed changes do not alter the safety functions of the vacuum breakers. When performing the surveillance to verify each vacuum breaker is closed, the expected result is the verification that the component is indeed closed. However, if this surveillance result is

not obtained, the Technical Specifications limit the time allowed to close the vacuum breaker. Additional time is being provided to verify that each vacuum breaker is closed; however, the overall time allowed for closing and verifying closure of a vacuum breaker is not being increased. Since the overall time to take action for an open vacuum breaker has not been increased, the proposed changes do not involve an increase in the consequences of an accident previously evaluated.

2. The proposed license amendments will not create the possibility of a new or different kind of accident from any accident previously evaluated.

The suppression chamber-to-drywell vacuum breakers are not an initiator of any design basis accident. Rather, the safety functions of the vacuum breaker valves are to relieve vacuum in the drywell following a loss-of-coolant accident and to remain closed when not relieving vacuum to ensure that no excessive bypass leakage occurs from the drywell to the suppression chamber. Neither safety function of these vacuum breakers is altered by the proposed changes. Therefore, the proposed changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed license amendments do not involve a significant reduction in a margin of safety.

The proposed changes will not affect the ability of the suppression chamber-to-drywell vacuum breakers to perform their safety functions. Rather, as previously stated, the proposed changes provide additional time to verify that each vacuum breaker is closed and reduce the time allowed for closing an open or inoperable vacuum breaker. As a result, the overall time for taking action for an open vacuum breaker is unchanged. The vacuum breakers will continue to be verified closed every 14 days, as part of a required functional test of the vacuum breaker every 31 days, and following any activity involving the discharge of steam to the suppression chamber. If a vacuum breaker is found to be open and cannot be closed as required, plant shutdown will continue to be required within the same time requirements as currently specified in the Technical Specifications. Current Technical Specifications allow up to 10 hours to close an open vacuum breaker (i.e., 2 hours to perform the surveillance to verify vacuum breaker closure and, if necessary, 8 hours to close the vacuum breaker). The proposed change maintains the 10 hour limit by reducing the time to 4 hours to close an open or inoperable vacuum breaker while increasing the time to 6 hours to complete the surveillance to verify vacuum breaker closure. Thus, on this basis, the proposed license amendments will not change overall plant risk and do not involve a significant reduction in a margin of safety.

ENCLOSURE 3

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 LICENSE AMENDMENTS - REVISION OF SURVEILLANCE FREQUENCY AND ACTION COMPLETION TIME FOR SUPPRESSION CHAMBER-TO- DRYWELL VACUUM BREAKER STATUS

Environmental Considerations

Carolina Power & Light (CP&L) Company is requesting a revision to the Technical Specifications for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2, to revise, from 2 hours to 6 hours, the time period in Surveillance Requirement 3.6.1.6.1 for verifying each suppression chamber-to-drywell vacuum breaker is closed after any discharge of steam to the suppression chamber from any source. Based on this change, the Completion Time in Condition B for closing an open vacuum breaker is being revised from 8 hours to 4 hours. CP&L has concluded that the proposed changes to the Technical Specifications for BSEP, Units 1 and 2, are eligible for categorical exclusion from performing an environmental assessment. In support of this determination, an evaluation of each of the three (3) criteria set forth in 10 CFR 51.22(c)(9) is provided below.

1. The proposed license amendments do not involve a significant hazards consideration, as shown in Enclosure 2.
2. The proposed license amendments do 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 license amendments do not introduce any new equipment nor require any existing equipment or systems to perform a different type of function than they are presently designed to perform. The proposed license amendments do 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, the changes do not involve irreversible environmental consequences beyond those already associated with normal operation.
3. No change is being made to the primary or alternate methods for verifying that each suppression chamber-to-drywell vacuum breaker is closed. Rather, the changes relate only to the times provided for verification that each vacuum breaker is closed and to the time to close an open vacuum breaker. As such, the proposed license amendments do not result in a significant increase in individual or cumulative occupational radiation exposure.

ENCLOSURE 4

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
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FREQUENCY AND ACTION COMPLETION TIME FOR SUPPRESSION CHAMBER-TO-
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Page Change Instructions

<u>UNIT 1</u>	
Removed page	Inserted page
3.6-18	3.6-18
3.6-19	3.6-19

<u>UNIT 2</u>	
Removed page	Inserted page
3.6-18	3.6-18
3.6-19	3.6-19

ENCLOSURE 5

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 LICENSE AMENDMENTS - REVISION OF SURVEILLANCE
FREQUENCY AND ACTION COMPLETION TIME FOR SUPPRESSION CHAMBER-TO-
DRYWELL VACUUM BREAKER STATUS

Typed Technical Specification Pages - Unit 1

3.6 CONTAINMENT SYSTEMS

3.6.1.6 Suppression Chamber-to-Drywell Vacuum Breakers

LCO 3.6.1.6 Eight suppression chamber-to-drywell vacuum breakers shall be OPERABLE for opening.

AND

Ten suppression chamber-to-drywell vacuum breakers shall be closed, except when performing their intended function.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required suppression chamber-to-drywell vacuum breaker inoperable for opening.	A.1 Restore one vacuum breaker to OPERABLE status.	72 hours
B. One suppression chamber-to-drywell vacuum breaker not closed.	B.1 Close the open vacuum breaker.	4 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	12 hours
	<u>AND</u> C.2 Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.1.6.1 -----NOTE----- Not required to be met for vacuum breakers that are open during Surveillances. -----</p> <p>Verify each vacuum breaker is closed.</p>	<p>14 days</p> <p><u>AND</u></p> <p>Within 6 hours after any discharge of steam to the suppression chamber from any source</p>
<p>3.6.1.6.2 Perform a functional test of each required vacuum breaker.</p>	<p>31 days</p> <p><u>AND</u></p> <p>Within 12 hours after any discharge of steam to the suppression chamber from any source</p>
<p>SR 3.6.1.6.3 Verify the full open setpoint of each required vacuum breaker is ≤ 0.5 psid.</p>	<p>24 months</p>

ENCLOSURE 6

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 LICENSE AMENDMENTS - REVISION OF SURVEILLANCE
FREQUENCY AND ACTION COMPLETION TIME FOR SUPPRESSION CHAMBER-TO-
DRYWELL VACUUM BREAKER STATUS

Typed Technical Specification Pages - Unit 2

3.6 CONTAINMENT SYSTEMS

3.6.1.6 Suppression Chamber-to-Drywell Vacuum Breakers

LCO 3.6.1.6 Eight suppression chamber-to-drywell vacuum breakers shall be OPERABLE for opening.

AND

Ten suppression chamber-to-drywell vacuum breakers shall be closed, except when performing their intended function.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required suppression chamber-to-drywell vacuum breaker inoperable for opening.	A.1 Restore one vacuum breaker to OPERABLE status.	72 hours
B. One suppression chamber-to-drywell vacuum breaker not closed.	B.1 Close the open vacuum breaker.	4 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	12 hours
	<u>AND</u> C.2 Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.1.6.1 -----NOTE----- Not required to be met for vacuum breakers that are open during Surveillances. -----</p> <p>Verify each vacuum breaker is closed.</p>	<p>14 days</p> <p><u>AND</u></p> <p>Within 6 hours after any discharge of steam to the suppression chamber from any source</p>
<p>SR 3.6.1.6.2 Perform a functional test of each required vacuum breaker.</p>	<p>31 days</p> <p><u>AND</u></p> <p>Within 12 hours after any discharge of steam to the suppression chamber from any source</p>
<p>SR 3.6.1.6.3 Verify the full open setpoint of each required vacuum breaker is ≤ 0.5 psid.</p>	<p>24 months</p>

ENCLOSURE 7

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 LICENSE AMENDMENTS - REVISION OF SURVEILLANCE
FREQUENCY AND ACTION COMPLETION TIME FOR SUPPRESSION CHAMBER-TO-
DRYWELL VACUUM BREAKER STATUS

Marked-up Technical Specification Pages - Unit 1

3.6 CONTAINMENT SYSTEMS

3.6.1.6 Suppression Chamber-to-Drywell Vacuum Breakers

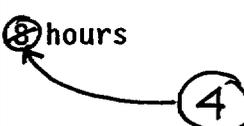
LCO 3.6.1.6 Eight suppression chamber-to-drywell vacuum breakers shall be OPERABLE for opening.

AND

Ten suppression chamber-to-drywell vacuum breakers shall be closed, except when performing their intended function.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required suppression chamber-to-drywell vacuum breaker inoperable for opening.	A.1 Restore one vacuum breaker to OPERABLE status.	72 hours
B. One suppression chamber-to-drywell vacuum breaker not closed.	B.1 Close the open vacuum breaker.	8 hours 
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	12 hours
	<u>AND</u> C.2 Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.1.6.1 -----NOTE----- Not required to be met for vacuum breakers that are open during Surveillances. -----</p> <p>Verify each vacuum breaker is closed.</p>	<p>14 days</p> <p><u>AND</u></p> <p>Within 6 hours after any discharge of steam to the suppression chamber from any source</p>
<p>SR 3.6.1.6.2 Perform a functional test of each required vacuum breaker.</p>	<p>31 days</p> <p><u>AND</u></p> <p>Within 12 hours after any discharge of steam to the suppression chamber from any source</p>
<p>SR 3.6.1.6.3 Verify the full open setpoint of each required vacuum breaker is ≤ 0.5 psid.</p>	<p>24 months</p>

ENCLOSURE 8

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 LICENSE AMENDMENTS - REVISION OF SURVEILLANCE
FREQUENCY AND ACTION COMPLETION TIME FOR SUPPRESSION CHAMBER-TO-
DRYWELL VACUUM BREAKER STATUS

Marked-up Technical Specification Pages - Unit 2

3.6 CONTAINMENT SYSTEMS

3.6.1.6 Suppression Chamber-to-Drywell Vacuum Breakers

LC0 3.6.1.6 Eight suppression chamber-to-drywell vacuum breakers shall be OPERABLE for opening.

AND

Ten suppression chamber-to-drywell vacuum breakers shall be closed, except when performing their intended function.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required suppression chamber-to-drywell vacuum breaker inoperable for opening.	A.1 Restore one vacuum breaker to OPERABLE status.	72 hours
B. One suppression chamber-to-drywell vacuum breaker not closed.	B.1 Close the open vacuum breaker.	⊕ hours 4
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	12 hours
	<u>AND</u> C.2 Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.1.6.1 -----NOTE----- Not required to be met for vacuum breakers that are open during Surveillances. ----- Verify each vacuum breaker is closed.</p>	<p>14 days AND Within 6 hours after any discharge of steam to the suppression chamber from any source</p>
<p>SR 3.6.1.6.2 Perform a functional test of each required vacuum breaker.</p>	<p>31 days AND Within 12 hours after any discharge of steam to the suppression chamber from any source</p>
<p>SR 3.6.1.6.3 Verify the full open setpoint of each required vacuum breaker is ≤ 0.5 psid.</p>	<p>24 months</p>

ENCLOSURE 9

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 LICENSE AMENDMENTS - REVISION OF SURVEILLANCE
FREQUENCY AND ACTION COMPLETION TIME FOR SUPPRESSION CHAMBER-TO-
DRYWELL VACUUM BREAKER STATUS

Marked-up Technical Specification Bases
Pages - Unit 1 (For Information Only)

BASES

ACTIONS

A.1 (continued)

plant conditions are consistent with those assumed for the design basis analysis. The 72 hour Completion Time is considered acceptable due to the low probability of an event in which the remaining vacuum breaker capability would not be adequate.

B.1

With one vacuum breaker not closed, communication between the drywell and suppression chamber airspace could occur, and, as a result, there is the potential for primary containment overpressurization due to this bypass leakage if a LOCA were to occur. Therefore, the open vacuum breaker must be closed. A short time is allowed to close the vacuum breaker due to the low probability of an event that would pressurize primary containment. If vacuum breaker position indication is not available, an alternate method of verifying that the vacuum breakers are closed is to verify that the differential pressure between the suppression chamber and drywell is maintained > 0.5 times the initial differential pressure for 1 hour without nitrogen makeup. The 4 hour Completion Time is considered adequate to perform this test.

4

C.1 and C.2

If any Required Action and associated Completion Time can not be met, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE
REQUIREMENTS

SR 3.6.1.6.1

Each vacuum breaker is verified closed (except when the vacuum breaker is performing its intended design function) to ensure that this potential large bypass leakage path is not present. This Surveillance is performed by observing the vacuum breaker position indication or by verifying that

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.6.1.6.1 (continued)

6 the differential pressure between the suppression chamber and drywell is maintained > 0.5 times the initial differential pressure for 1 hour without nitrogen makeup. The 14 day Frequency is based on engineering judgment, is considered adequate in view of other indications of vacuum breaker status available to operations personnel and procedural controls to ensure the drywell is normally maintained at a higher pressure than the suppression chamber, and has been shown to be acceptable through operating experience. This verification is also required within 2 hours after any discharge of steam to the suppression chamber from any source.

A Note is added to this SR which allows suppression chamber-to-drywell vacuum breakers opened in conjunction with the performance of a Surveillance to not be considered as failing this SR. These periods of opening vacuum breakers are controlled by plant procedures and do not represent inoperable vacuum breakers.

SR 3.6.1.6.2

Each required vacuum breaker must be cycled to ensure that it opens adequately to perform its design function and returns to the fully closed position. This is accomplished by verifying each required vacuum breaker operates through at least one complete cycle of full travel. This SR ensures that the safety analysis assumptions are valid. The 31 day Frequency of this SR was developed, based on Inservice Testing Program requirements to perform valve testing at least once every 92 days. A 31 day Frequency was chosen to provide additional assurance that the vacuum breakers are OPERABLE, since they are located in a harsh environment (the suppression chamber airspace). In addition, this functional test is required within 12 hours after a discharge of steam to the suppression chamber from any source.

SR 3.6.1.6.3

Verification of the vacuum breaker opening setpoint is necessary to ensure that the safety analysis assumption regarding vacuum breaker full open differential pressure of 0.5 psid is valid. The 24 month Frequency is based on the

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