



Progress Energy

SEP 14 2006

SERIAL: BSEP 06-0101

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

Subject: Brunswick Steam Electric Plant, Unit Nos. 1 and 2
Docket Nos. 50-325 and 50-324/License Nos. DPR-71 and DPR-62
Submittal of Technical Specification Bases Revisions

Ladies and Gentlemen:

In accordance with Technical Specification (TS) 5.5.10 for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2, Carolina Power & Light Company (CP&L), now doing business as Progress Energy Carolinas, Inc., is submitting Revision 47 to the BSEP, Unit 1 TS Bases and Revision 45 to the BSEP, Unit 2 TS Bases.

Please refer any questions regarding this submittal to Mr. Leonard R. Beller, Supervisor - Licensing/Regulatory Programs, at (910) 457-2073.

Sincerely,

Randy C. Ivey
Manager - Support Services
Brunswick Steam Electric Plant

WRM/wrm

Enclosures:

1. Summary of Revisions to Technical Specification Bases
2. Page Replacement Instructions
3. Unit 1 Technical Specification Bases Replacement Pages
4. Unit 2 Technical Specification Bases Replacement Pages

Document Control Desk
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cc (with enclosures):

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Summary of Revisions to Technical Specification (TS) Bases			
Revision ¹	Affected Unit	Date Implemented	Title/Description
47 45	1 2	June 29, 2006	Title: Suppression Chamber-to-Drywell Stroke Testing Description: Revision 47 for Unit 1 and 45 for Unit 2 incorporated changes to Section 3.6.1.6.2 of the TS Bases associated with Amendment 240 for Unit 1 and Amendment 268 for Unit 2, issued May 5, 2006. These amendments revised the frequency for functional (i.e., stroke) testing of the suppression chamber-to-drywell vacuum breakers from 31 days to every 92 days, as well as changed the conditions under which steam discharges to the suppression chamber would require additional functional testing.

¹ Revision 47 for Unit 1 and Revision 45 for Unit 2 incorporated change package TSC-2004-04.

Page Replacement Instructions - Unit 1	
Remove	Insert
Unit 1 - Bases Book 1	
Title Page, Revision 46	Title Page, Revision 47
LOEP-1, Revision 46	LOEP-1, Revision 47
Unit 1 - Bases Book 2	
LOEP-1, Revision 46	LOEP-1, Revision 47
LOEP-2, Revision 46	LOEP-2, Revision 47
B 3.6.1.6-5, Revision 31	B 3.6.1.6-5, Revision 47
B 3.6.1.6-6, Revision 31	---

Page Replacement Instructions - Unit 2	
Remove	Insert
Unit 2 - Bases Book 1	
Title Page, Revision 44	Title Page, Revision 45
LOEP-1, Revision 44	LOEP-1, Revision 45
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LOEP-1, Revision 44	LOEP-1, Revision 45
LOEP-2, Revision 44	LOEP-2, Revision 45
B 3.6.1.6-5, Revision 30	B 3.6.1.6-5, Revision 45
B 3.6.1.6-6, Revision 30	---

BSEP 06-0101
Enclosure 3

**Unit 1 Technical Specification Bases
Replacement Pages**

Unit 1 - Bases Book 1
Replacement Pages

BASES

TO

THE FACILITY OPERATING LICENSE DPR-71

TECHNICAL SPECIFICATIONS

FOR

BRUNSWICK STEAM ELECTRIC PLANT

UNIT 1

CAROLINA POWER & LIGHT COMPANY

REVISION 47

LIST OF EFFECTIVE PAGES - BASES

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LOEP-1	47	B 3.1.2-4	31
LOEP-2	36	B 3.1.2-5	31
LOEP-3	44	B 3.1.3-1	31
LOEP-4	45	B 3.1.3-2	31
		B 3.1.3-3	31
i	42	B 3.1.3-4	31
ii	31	B 3.1.3-5	31
		B 3.1.3-6	31
B 2.1.1-1	31	B 3.1.3-7	31
B 2.1.1-2	31	B 3.1.3-8	31
B 2.1.1-3	31	B 3.1.3-9	31
B 2.1.1-4	31	B 3.1.4-1	31
B 2.1.1-5	31	B 3.1.4-2	31
B 2.1.2-1	31	B 3.1.4-3	31
B 2.1.2-2	31	B 3.1.4-4	31
B 2.1.2-3	31	B 3.1.4-5	42
		B 3.1.4-6	31
B 3.0-1	31	B 3.1.4-7	31
B 3.0-2	31	B 3.1.5-1	31
B 3.0-3	31	B 3.1.5-2	31
B 3.0-4	31	B 3.1.5-3	31
B 3.0-5	41	B 3.1.5-4	31
B 3.0-6	41	B 3.1.5-5	31
B 3.0-7	41	B 3.1.6-1	31
B 3.0-8	41	B 3.1.6-2	31
B 3.0-9	41	B 3.1.6-3	31
B 3.0-10	41	B 3.1.6-4	31
B 3.0-11	41	B 3.1.6-5	31
B 3.0-12	41	B 3.1.7-1	34
B 3.0-13	41	B 3.1.7-2	31
B 3.0-14	41	B 3.1.7-3	31
B 3.0-15	41	B 3.1.7-4	31
B 3.0-16	41	B 3.1.7-5	31
B 3.0-17	41	B 3.1.7-6	34
		B 3.1.8-1	31
B 3.1.1-1	31	B 3.1.8-2	37
B 3.1.1-2	31	B 3.1.8-3	37
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B 3.1.1-4	31	B 3.1.8-5	31
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**Unit 1 - Bases Book 2
Replacement Pages**

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LOEP-5	31	B 3.4.8-5	31
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ii	31	B 3.4.9-2	38
B 3.4.1-1	31	B 3.4.9-3	38
B 3.4.1-2	31	B 3.4.9-4	31
B 3.4.1-3	31	B 3.4.9-5	38
B 3.4.1-4	31	B 3.4.9-6	38
B 3.4.1-5	31	B 3.4.9-7	31
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B 3.4.3-2	31	B 3.5.1-3	31
B 3.4.3-3	31	B 3.5.1-4	36
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B 3.4.4-1	31	B 3.5.1-6	41
B 3.4.4-2	31	B 3.5.1-7	31
B 3.4.4-3	31	B 3.5.1-8	31
B 3.4.4-4	31	B 3.5.1-9	31
B 3.4.4-5	31	B 3.5.1-10	31
B 3.4.5-1	31	B 3.5.1-11	31
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B 3.4.5-3	43	B 3.5.1-13	31
B 3.4.5-4	41	B 3.5.1-14	44
B 3.4.6-1	41	B 3.5.1-15	44
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B 3.4.6-3	41	B 3.5.1-17	31
B 3.4.7-1	31	B 3.5.2-1	31
B 3.4.7-2	31	B 3.5.2-2	31
B 3.4.7-3	41	B 3.5.2-3	31
B 3.4.7-4	41	B 3.5.2-4	31
		B 3.5.2-5	31
		B 3.5.2-6	31
		B 3.5.3-1	31
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B 3.5.3-4	31	B 3.6.1.5-8	36
B 3.5.3-5	31	B 3.6.1.5-9	31
B 3.5.3-6	31	B 3.6.1.6-1	31
B 3.5.3-7	31	B 3.6.1.6-2	31
		B 3.6.1.6-3	31
B 3.6.1.1-1	31	B 3.6.1.6-4	31
B 3.6.1.1-2	31	B 3.6.1.6-5	47
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B 3.6.1.1-4	46	B 3.6.2.1-1	31
B 3.6.1.1-5	46	B 3.6.2.1-2	31
B 3.6.1.1-6	46	B 3.6.2.1-3	31
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B 3.6.1.2-2	31	B 3.6.2.1-5	31
B 3.6.1.2-3	31	B 3.6.2.2-1	31
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B 3.6.1.3-2	31	B 3.6.3.1-1	31
B 3.6.1.3-3	31	B 3.6.3.1-2	31
B 3.6.1.3-4	31	B 3.6.3.1-3	31
B 3.6.1.3-5	31	B 3.6.3.2-1	31
B 3.6.1.3-6	31	B 3.6.3.2-2	31
B 3.6.1.3-7	31	B 3.6.3.2-3	41
B 3.6.1.3-8	31	B 3.6.3.2-4	41
B 3.6.1.3-9	31	B 3.6.3.2-5	41
B 3.6.1.3-10	31	B 3.6.4.1-1	31
B 3.6.1.3-11	31	B 3.6.4.1-2	31
B 3.6.1.3-12	46	B 3.6.4.1-3	31
B 3.6.1.3-13	46	B 3.6.4.1-4	31
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B 3.6.1.4-3	31	B 3.6.4.2-3	31
B 3.6.1.5-1	31	B 3.6.4.2-4	31
B 3.6.1.5-2	31	B 3.6.4.2-5	31
B 3.6.1.5-3	31	B 3.6.4.2-6	31
B 3.6.1.5-4	31	B 3.6.4.3-1	31
B 3.6.1.5-5	31	B 3.6.4.3-2	31
B 3.6.1.5-6	31	B 3.6.4.3-3	31

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.6.1.6.1 (continued)

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 6 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 92 day Frequency of this SR was developed, based on Inservice Testing Program requirements to perform valve testing at least once every 92 days. In addition, this functional test is required within 12 hours after a discharge of steam to the suppression chamber from the SRVs and within 12 hours after an operation that causes any of the vacuum breakers to open.

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 need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. The 24 month Frequency has been demonstrated to be acceptable, based on operating experience, and is further justified because of other surveillances performed more frequently that convey the proper functioning status of each vacuum breaker.

REFERENCES

1. UFSAR, Section 6.2.
 2. 10 CFR 50.36(c)(2)(ii).
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BSEP 06-0101
Enclosure 4

**Unit 2 Technical Specification Bases
Replacement Pages**

Unit 2 - Bases Book 1
Replacement Pages

BASES

TO

THE FACILITY OPERATING LICENSE DPR-62

TECHNICAL SPECIFICATIONS

FOR

BRUNSWICK STEAM ELECTRIC PLANT

UNIT 2

CAROLINA POWER & LIGHT COMPANY

REVISION 45

LIST OF EFFECTIVE PAGES - BASES

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		B 3.1.2-4	30
		B 3.1.2-5	30
		B 3.1.3-1	30
LOEP-2	37	B 3.1.3-2	30
LOEP-3	42	B 3.1.3-3	30
LOEP-4	43	B 3.1.3-4	30
i	40	B 3.1.3-5	30
ii	30	B 3.1.3-6	30
B 2.1.1-1	30	B 3.1.3-7	30
B 2.1.1-2	30	B 3.1.3-8	30
B 2.1.1-3	30	B 3.1.3-9	30
B 2.1.1-4	30	B 3.1.4-1	30
B 2.1.1-5	30	B 3.1.4-2	30
B 2.1.2-1	30	B 3.1.4-3	30
B 2.1.2-2	30	B 3.1.4-4	30
B 2.1.2-3	30	B 3.1.4-5	40
		B 3.1.4-6	30
B 3.0-1	30	B 3.1.4-7	30
B 3.0-2	30	B 3.1.5-1	30
B 3.0-3	30	B 3.1.5-2	30
B 3.0-4	30	B 3.1.5-3	30
B 3.0-5	39	B 3.1.5-4	30
B 3.0-6	39	B 3.1.5-5	30
B 3.0-7	39	B 3.1.6-1	30
B 3.0-8	39	B 3.1.6-2	30
B 3.0-9	39	B 3.1.6-3	30
B 3.0-10	39	B 3.1.6-4	30
B 3.0-11	39	B 3.1.6-5	30
B 3.0-12	39	B 3.1.7-1	30
B 3.0-13	39	B 3.1.7-2	30
B 3.0-14	39	B 3.1.7-3	30
B 3.0-15	39	B 3.1.7-4	30
B 3.0-16	39	B 3.1.7-5	30
B 3.0-17	39	B 3.1.7-6	30
		B 3.1.8-1	30
B 3.1.1-1	30	B 3.1.8-2	34
B 3.1.1-2	30	B 3.1.8-3	34
B 3.1.1-3	30	B 3.1.8-4	30
B 3.1.1-4	30	B 3.1.8-5	30
B 3.1.1-5	30		

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LOEP-2	45	B 3.4.8-4	30
LOEP-3	43	B 3.4.8-5	30
LOEP-4	30	B 3.4.9-1	30
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		B 3.4.9-3	35
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ii	30	B 3.4.9-5	35
		B 3.4.9-6	35
B 3.4.1-1	30	B 3.4.9-7	30
B 3.4.1-2	30	B 3.4.9-8	30
B 3.4.1-3	30	B 3.4.9-9	35
B 3.4.1-4	30	B 3.4.10-1	30
B 3.4.1-5	30	B 3.4.10-2	30
B 3.4.1-6	30		
B 3.4.2-1	30	B 3.5.1-1	30
B 3.4.2-2	30	B 3.5.1-2	30
B 3.4.2-3	30	B 3.5.1-3	30
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B 3.4.3-1	30	B 3.5.1-5	33
B 3.4.3-2	30	B 3.5.1-6	39
B 3.4.3-3	30	B 3.5.1-7	30
B 3.4.3-4	30	B 3.5.1-8	30
B 3.4.4-1	30	B 3.5.1-9	30
B 3.4.4-2	30	B 3.5.1-10	30
B 3.4.4-3	30	B 3.5.1-11	30
B 3.4.4-4	30	B 3.5.1-12	30
B 3.4.4-5	30	B 3.5.1-13	30
B 3.4.5-1	30	B 3.5.1-14	30
B 3.4.5-2	30	B 3.5.1-15	42
B 3.4.5-3	41	B 3.5.1-16	42
B 3.4.5-4	39	B 3.5.1-17	30
B 3.4.6-1	39	B 3.5.2-1	30
B 3.4.6-2	39	B 3.5.2-2	30
B 3.4.6-3	39	B 3.5.2-3	30
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B 3.4.7-2	30	B 3.5.2-5	30
B 3.4.7-3	39	B 3.5.2-6	30
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B 3.5.3-5	30	B 3.6.1.5-9	30
B 3.5.3-6	30	B 3.6.1.6-1	30
B 3.5.3-7	30	B 3.6.1.6-2	30
		B 3.6.1.6-3	30
		B 3.6.1.6-4	30
		B 3.6.1.6-5	45
B 3.6.1.1-1	30		
B 3.6.1.1-2	30	B 3.6.2.1-1	30
B 3.6.1.1-3	30	B 3.6.2.1-2	30
B 3.6.1.1-4	44	B 3.6.2.1-3	30
B 3.6.1.1-5	44	B 3.6.2.1-4	30
B 3.6.1.1-6	44	B 3.6.2.1-5	30
B 3.6.1.2-1	30	B 3.6.2.2-1	30
B 3.6.1.2-2	30	B 3.6.2.2-2	30
B 3.6.1.2-3	30	B 3.6.2.2-3	30
B 3.6.1.2-4	30	B 3.6.2.3-1	30
B 3.6.1.2-5	30	B 3.6.2.3-2	39
B 3.6.1.2-6	30	B 3.6.2.3-3	39
B 3.6.1.2-7	44	B 3.6.2.3-4	39
B 3.6.1.2-8	44	B 3.6.3.1-1	30
B 3.6.1.3-1	30	B 3.6.3.1-2	30
B 3.6.1.3-2	30	B 3.6.3.1-3	30
B 3.6.1.3-3	30	B 3.6.3.2-1	30
B 3.6.1.3-4	30	B 3.6.3.2-2	30
B 3.6.1.3-5	30	B 3.6.3.2-3	39
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B 3.6.1.3-7	30	B 3.6.3.2-5	39
B 3.6.1.3-8	30	B 3.6.4.1-1	30
B 3.6.1.3-9	30	B 3.6.4.1-2	30
B 3.6.1.3-10	30	B 3.6.4.1-3	30
B 3.6.1.3-11	30	B 3.6.4.1-4	30
B 3.6.1.3-12	44	B 3.6.4.1-5	30
B 3.6.1.3-13	44	B 3.6.4.2-1	30
B 3.6.1.3-14	44	B 3.6.4.2-2	30
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B 3.6.1.5-2	30	B 3.6.4.3-1	30
B 3.6.1.5-3	30	B 3.6.4.3-2	30
B 3.6.1.5-4	30	B 3.6.4.3-3	30
B 3.6.1.5-5	30		
B 3.6.1.5-6	30		

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.6.1.6.1 (continued)

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 6 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 92 day Frequency of this SR was developed, based on Inservice Testing Program requirements to perform valve testing at least once every 92 days. In addition, this functional test is required within 12 hours after a discharge of steam to the suppression chamber from the SRVs and within 12 hours after an operation that causes any of the vacuum breakers to open.

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 need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. The 24 month Frequency has been demonstrated to be acceptable, based on operating experience, and is further justified because of other surveillances performed more frequently that convey the proper functioning status of each vacuum breaker.

REFERENCES

1. UFSAR, Section 6.2.
 2. 10 CFR 50.36(c)(2)(ii).
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