



**Progress Energy**

**SEP 16 2004**

**SERIAL: BSEP 04-0134**

**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 Changes**

**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, now doing business as Progress Energy Carolinas, Inc., is submitting Revision 37 to the BSEP, Unit 1 TS Bases and Revision 34 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,**



*For*

**Edward T. O'Neil  
Manager - Support Services  
Brunswick Steam Electric Plant**

**SFT/sft**

**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**

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cc (with enclosures):

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Summary of Revisions to Technical Specification Bases			
Revision	Affected Unit	Date Implemented	Title/Description
37 <sup>1</sup> 34 <sup>1</sup>	1 2	July 15, 2004	<b>Title:</b> Scram Discharge Volume Vent And Drain Valves (TSC-2003-08)  <b>Description:</b> This change to TS Bases 3.1.8 revises the actions associated with inoperability of SDV vent or drain valve/s in one or more SDV vent drain lines consistent with Technical Specifications Task Force (TSTF) change traveler TSTF-404, Revision 0.

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<sup>1</sup> Note: Revision 37 for Unit 1 and Revision 34 for Unit 2 incorporated Bases change package TSC-2003-08.

Page Replacement Instructions	
Remove	Insert
<b>Unit 1 - Bases Book 1</b>	
Title Page, Revision 36	Title Page, Revision 37
LOEP-1, Revision 36	LOEP-1, Revision 37
B 3.1.8-2, Revision 31	B 3.1.8-2, Revision 37
B 3.1.8-3, Revision 31	B 3.1.8-3, Revision 37
<b>Unit 2 - Bases Book 1</b>	
Title Page, Revision 33	Title Page, Revision 34
LOEP-1, Revision 33	LOEP-1, Revision 34
B 3.1.8-2, Revision 30	B 3.1.8-2, Revision 34
B 3.1.8-3, Revision 30	B 3.1.8-3, Revision 34

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Enclosure 3

**Unit 1 Technical Specification Bases  
Replacement Pages**

**BASES**

**TO**

**THE FACILITY OPERATING LICENSE DPR-71**

**TECHNICAL SPECIFICATIONS**

**FOR**

**BRUNSWICK STEAM ELECTRIC PLANT**

**UNIT 1**

**CAROLINA POWER & LIGHT COMPANY**

**REVISION 37**

# LIST OF EFFECTIVE PAGES - BASES

<u>Page No.</u>	<u>Revision No.</u>	<u>Page No.</u>	<u>Revision No.</u>
Title Page	37	B 3.1.2-1	31
List of Effective Pages - Book 1		B 3.1.2-2	31
		B 3.1.2-3	31
		B 3.1.2-4	31
LOEP-1	37	B 3.1.2-5	31
LOEP-2	36	B 3.1.3-1	31
LOEP-3	36	B 3.1.3-2	31
LOEP-4	36	B 3.1.3-3	31
		B 3.1.3-4	31
i	31	B 3.1.3-5	31
ii	31	B 3.1.3-6	31
		B 3.1.3-7	31
B 2.1.1-1	31	B 3.1.3-8	31
B 2.1.1-2	31	B 3.1.3-9	31
B 2.1.1-3	31	B 3.1.4-1	31
B 2.1.1-4	31	B 3.1.4-2	31
B 2.1.1-5	31	B 3.1.4-3	31
B 2.1.2-1	31	B 3.1.4-4	31
B 2.1.2-2	31	B 3.1.4-5	31
B 2.1.2-3	31	B 3.1.4-6	31
		B 3.1.4-7	31
B 3.0-1	31	B 3.1.5-1	31
B 3.0-2	31	B 3.1.5-2	31
B 3.0-3	31	B 3.1.5-3	31
B 3.0-4	31	B 3.1.5-4	31
B 3.0-5	31	B 3.1.5-5	31
B 3.0-6	31	B 3.1.6-1	31
B 3.0-7	31	B 3.1.6-2	31
B 3.0-8	31	B 3.1.6-3	31
B 3.0-9	31	B 3.1.6-4	31
B 3.0-10	31	B 3.1.6-5	31
B 3.0-11	31	B 3.1.7-1	34
B 3.0-12	31	B 3.1.7-2	31
B 3.0-13	31	B 3.1.7-3	31
B 3.0-14	31	B 3.1.7-4	31
B 3.0-15	31	B 3.1.7-5	31
B 3.0-16	31	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
B 3.1.1-3	31	B 3.1.8-4	31
B 3.1.1-4	31	B 3.1.8-5	31
B 3.1.1-5	31		
B 3.1.1-6	31		

(continued)

BASES

<b>APPLICABLE SAFETY ANALYSES</b> (continued)	capacity to contain the reactor coolant discharge during a full core scram. To automatically ensure this capacity, a reactor scram (LCO 3.3.1.1, "Reactor Protection System (RPS) Instrumentation") is initiated if the SDV water level in the instrument volume exceeds a specified setpoint. The setpoint is chosen so that all control rods are inserted before the SDV has insufficient volume to accept a full scram.  SDV vent and drain valves satisfy Criterion 3 of 10 CFR 50.36(c)(2)(ii) (Ref. 3).
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<b>LCO</b>	The OPERABILITY of all SDV vent and drain valves ensures that the SDV vent and drain valves will close during a scram to contain reactor water discharged to the SDV piping. Since the vent and drain lines are provided with two valves in series, the single failure of one valve in the open position will not impair the isolation function of the system. Additionally, the valves are required to open on scram reset to ensure that a path is available for the SDV piping to drain freely at other times.
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<b>APPLICABILITY</b>	In MODES 1 and 2, scram may be required; therefore, the SDV vent and drain valves must be OPERABLE. In MODES 3 and 4, control rods are not able to be withdrawn since the reactor mode switch is in the shutdown position and a control rod block is applied. This provides adequate controls to ensure that control rods cannot be withdrawn. Also, during MODE 5, only a single control rod can be withdrawn from a core cell containing fuel assemblies. Therefore, the SDV vent and drain valves are not required to be OPERABLE in these MODES since the reactor is subcritical and no more than one rod may be withdrawn and subject to scram.
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<b>ACTIONS</b>	<p>The ACTIONS Table is modified by Notes indicating that a separate Condition entry is allowed for each SDV vent and drain line. This is acceptable, since the Required Actions for each Condition provide appropriate compensatory actions for each inoperable SDV line. Complying with the Required Actions may allow for continued operation, and subsequent inoperable SDV lines are governed by subsequent Condition entry and application of associated Required Actions.</p> <p>When a line is isolated, the potential for an inadvertent scram due to high SDV level is increased. During these periods, the line may be unisolated under administrative control. This allows any accumulated water in the line to be drained, to preclude a reactor scram on SDV high level. This is acceptable since the administrative controls ensure the valve can be closed quickly, by a dedicated operator, if a scram occurs with the valve open.</p>
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(continued)



BASES

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ACTIONS  
(continued)

A.1

When one SDV vent or drain valve is inoperable in one or more lines, the associated line must be isolated to contain the reactor coolant during a scram. The 7 day Completion Time is reasonable, given the redundant capability afforded by the remaining valves in the affected lines and the low probability of a scram occurring while the valve(s) are inoperable and the line is not isolated. The SDV is still isolable since the redundant valve in the affected line is OPERABLE. During these periods, the single failure criterion may not be preserved, and a higher risk exists to allow reactor water out of the primary system during a scram.

B.1

If both valves in a line are inoperable, the line must be isolated to contain the reactor coolant during a scram. The 8 hour Completion Time to isolate the line is based on the low probability of a scram occurring while the line is not isolated and unlikelihood of significant CRD seal and scram exhaust valve leakage.

C.1

If any Required Action and associated Completion Time is not 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. The allowed Completion Time of 12 hours is reasonable, based on operating experience, to reach MODE 3 from full power conditions in an orderly manner and without challenging plant systems.

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BSEP 04-0134  
Enclosure 4

**Unit 2 Technical Specification Bases  
Replacement Pages**

**BASES**

**TO**

**THE FACILITY OPERATING LICENSE DPR-62**

**TECHNICAL SPECIFICATIONS**

**FOR**

**BRUNSWICK STEAM ELECTRIC PLANT**

**UNIT 2**

**CAROLINA POWER & LIGHT COMPANY**

**REVISION 34**

# LIST OF EFFECTIVE PAGES - BASES

<u>Page No.</u>	<u>Revision No.</u>	<u>Page No.</u>	<u>Revision No.</u>
Title Page	34	B 3.1.2-1	30
List of Effective Pages - Book 1		B 3.1.2-2	30
LOEP-1	34	B 3.1.2-3	30
LOEP-2	33	B 3.1.2-4	30
LOEP-3	33	B 3.1.2-5	30
LOEP-4	33	B 3.1.3-1	30
i	30	B 3.1.3-2	30
ii	30	B 3.1.3-3	30
B 2.1.1-1	30	B 3.1.3-4	30
B 2.1.1-2	30	B 3.1.3-5	30
B 2.1.1-3	30	B 3.1.3-6	30
B 2.1.1-4	30	B 3.1.3-7	30
B 2.1.1-5	30	B 3.1.3-8	30
B 2.1.2-1	30	B 3.1.3-9	30
B 2.1.2-2	30	B 3.1.4-1	30
B 2.1.2-3	30	B 3.1.4-2	30
B 3.0-1	30	B 3.1.4-3	30
B 3.0-2	30	B 3.1.4-4	30
B 3.0-3	30	B 3.1.4-5	30
B 3.0-4	30	B 3.1.4-6	30
B 3.0-5	30	B 3.1.4-7	30
B 3.0-6	30	B 3.1.5-1	30
B 3.0-7	30	B 3.1.5-2	30
B 3.0-8	30	B 3.1.5-3	30
B 3.0-9	30	B 3.1.5-4	30
B 3.0-10	30	B 3.1.5-5	30
B 3.0-11	30	B 3.1.6-1	30
B 3.0-12	30	B 3.1.6-2	30
B 3.0-13	30	B 3.1.6-3	30
B 3.0-14	30	B 3.1.6-4	30
B 3.0-15	30	B 3.1.6-5	30
B 3.0-16	30	B 3.1.7-1	30
B 3.1.1-1	30	B 3.1.7-2	30
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B 3.1.1-3	30	B 3.1.7-4	30
B 3.1.1-4	30	B 3.1.7-5	30
B 3.1.1-5	30	B 3.1.7-6	30
B 3.1.1-6	30	B 3.1.8-1	30
		B 3.1.8-2	34
		B 3.1.8-3	34
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(continued)

## BASES

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(continued)

BASES

ACTIONS  
(continued)

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