CP&L

Carolina Power & Light Company
P.O. Box 10429
Southport, NC 28461-0429

DEC 11 1996

SERIAL: BSEP 96-0467
10 CFR 50.73

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

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO.1
DOCKET NO. 50-325/LICENSE NO. DPR-71
LICENSEE EVENT REPORT 1-96-015, SUPPLEMENT 1

Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Part 50.73, Carolina Power & Light Company submits Supplement 1 to Licensee Event Report 1-96-015, Technical Specification Required Suppression Chamber Water Volume Discrepancy. This supplement revises the committed dates for changes to the Technical Specification and Updated Final Safety Analysis Report references to suppression chamber volume requirements. Please refer any questions regarding this submittal to Mr. Mark Turkal at (910) 457-3066.

Sincerely,

W. Levis
Director — Site Operations
Brunswick Nuclear Plant

MAT/wrm

Enclosures
1. Licensee Event Report 1-96-015, Supplement 1
2. Summary of Commitments

cc: Mr. S. D. Ebneter, Regional Administrator, Region II
Mr. D. C. Trimble, Jr., NRR Project Manager - Brunswick Units 1 and 2
Mr. C. A. Patterson, NRC Senior Resident Inspector - Brunswick Units 1 and 2
The Honorable H. Wells, Chairman - North Carolina Utilities Commission

Enclosure
List of Regulatory Commitments

The following table identifies those actions committed to by Carolina Power & Light Company in this document. Any other actions discussed in the submittal represent intended or planned actions by Carolina Power & Light Company. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Manager-Regulatory Affairs at the Brunswick Nuclear Plant of any questions regarding this document or any associated regulatory commitments.

Commitment	Committed date or outage
A change to the Technical Specifications will be submitted to correct the suppression chamber water volumes consistent with current calculations.	1/15/97
A revision to the UFSAR will be prepared to correct the suppression chamber water volumes consistent with current calculations and the revision included in the UFSAR pending change system.	1/15/97

NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Brunswick Steam Electric Plant, Unit 1	05000325	1 OF 4

TITLE (4)

Technical Specification Required Suppression Chamber Water Volume Discrepancy

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	19	96	96	-- 15 --	01	12	11	96	BSEP - Unit 2	05000324
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	05
POWER LEVEL (10)	0%

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.2201(b)		20.2203(a)(2)(v)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)
	20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
	20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
	20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
	20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Steve Tabor, Sr. Analyst - Licensing	(910) 457-2178

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On October 19, 1996, with Unit 1 shutdown for the B111R1 refuel outage and Unit 2 operating at maximum power, it was determined that the suppression chamber water level operating range of -27 to -31 inches required by Technical Specification 3.6.2.1, was not equivalent to the corresponding water volumes of 89,600 and 87,600 cu. ft. as delineated in the specification. Therefore, having maintained suppression chamber water level within the Technical Specification limits has not assured that the required water volume was maintained. Specifically, operation at the limits of the suppression chamber water level operating band of -27 to -31 inches equates to 89,843 and 86,545 cu. ft. respectively. The cause of this event is attributed to inaccurate calculations performed in support of Brunswick's original operating license. These calculations did not accurately model the volume of the suppression chamber.

Upon recognizing this condition the necessary administrative controls were established to ensure no immediate operability concern existed by limiting the suppression chamber water level to a more restrictive operating range. Additional corrective actions include performing analyses to document acceptance of the actual minimum and maximum suppression chamber water volumes and submittal of Technical Specification and Updated Final Safety Analysis Report changes to indicate the correct suppression chamber volume requirements.

This event has minimal safety significance in that although it appears that based on previous operating history suppression chamber water volumes have not been maintained within the limits required by the Technical Specifications, the key containment response parameters remain within the previously established acceptable limits.

Supplement 1 to this LER revises the committed dates related to changes to the Technical Specification and Updated Final Safety Analysis Report references to suppression chamber volume requirements.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
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Brunswick Steam Electric Plant, Unit 1	05000325	96	-- 15 --	01	2 OF 4

TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

TITLE

Technical Specification Required Suppression Chamber Water Volume Discrepancy

INITIAL CONDITIONS

On October 19, 1996, Unit 1 was shutdown for the B111R1 refuel outage and Unit 2 was operating at maximum power.

EVENT NARRATIVE

In support of the Improved Technical Specification Project at Brunswick, Engineering was tasked with documenting the basis for the suppression chamber high water level function. While evaluating suppression chamber water level in support of this request, Engineering determined that the suppression chamber water volumes as stated in the Technical Specification and the Updated Final Safety Analysis Report (UFSAR) appeared to be incorrect. Specifically, the suppression chamber water level operating range of -27 to -31 inches required by Technical Specification 3.6.2.1 did not appear to be equivalent to the corresponding water volumes of 89,600 and 87,600 cu. ft. as delineated in the specification.

On September 30, 1996, a condition report was generated in accordance with the requirements of the Corrective Action Program to identify the suppression chamber water volume discrepancy and track resolution of the issue. Recommended corrective action at this time included completion of a formal evaluation to establish a basis for maximum/minimum suppression chamber water volumes and associated levels while using vendor input and considering Power Uprate conditions. In addition, on October 3, 1996, compensatory measures were established to support maintaining suppression chamber water level within a more restrictive band of -28 to -30 inches.

On October 19, 1996, further evaluation of this condition determined that operation at the limits of the suppression chamber water level operating band of -27 to -31 inches equates to 89,843 to 86,545 cu. ft. respectively. Based on the results of this evaluation the compensatory measures were adjusted to -27.5 and -29.5 inches to ensure Technical Specification required water volumes were maintained. Operation at the limits of the suppression chamber water level operating band of -27 to -31 inches is allowed by procedure and has occurred routinely during the plant operating history. Consequently, having maintained suppression chamber water level within the Technical Specification limits has not assured that the required water volume was maintained.

This event is being reported in accordance with the requirements of 10 CFR 50.73(a)(2)(i) in that based on the calculation completed on October 19, 1996, operating the units with suppression chamber water level within the Technical Specification limits has not assured that the required water volumes were maintained within specification requirements.

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

CAUSE OF EVENT

The cause of this event is attributed to inaccurate calculations performed in support of Brunswick's original operating license in that these calculations did not accurately model the volume of the suppression chamber.

CORRECTIVE ACTIONS

The necessary administrative controls have been established to ensure no immediate operability concerns exist by restricting the suppression chamber water level operating range to between -27.5 and -29.5 inches. This is an interim measure until a change to the Technical Specification can be implemented.

An analysis documenting the actual minimum and maximum suppression chamber water volumes has been performed. These actual volumes have been used as inputs to reanalyze the effects on key containment response parameters including the following: Design Basis Accident/Loss of Coolant Accident short and long term suppression chamber response, Regulatory Guide 1.139 shutdown capability, and the impact on suppression chamber temperature resulting from a stuck open safety relief valve and the effects of Anticipated Transient Without SCRAM (ATWS), Appendix R, and Station Blackout scenarios.

A change to the Technical Specifications will be submitted by January 15, 1997, to correct the suppression chamber water volumes consistent with current calculations.

A revision to the UFSAR will be prepared to correct the suppression chamber water volumes consistent with current calculations and the revision included in the UFSAR pending change system by January 15, 1997.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
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Brunswick Steam Electric Plant, Unit 1	05000325	96	-- 15	-- 01	4 OF 4

TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

SAFETY ASSESSMENT

This event has minimal safety significance in that although it appears that based on previous operating history suppression chamber water volumes have not been maintained within the limits required by the Technical Specifications, the key containment response parameters remain within the previously establi[illegible]d acceptable limits. This conclusion is based on General Electric Company analysis documented in GE-N[illegible]23-00739-01. The results of this analysis indicate no adverse impact on the following: Safety Relief Valve (SRV) discharge line loads, SRV discharge line reflood height, wetwell pressurization, suppression chamber loads, vent thrust loads, condensation oscillation and chugging loads, and short term suppression chamber temperature response. In addition, the analysis determined that the following conditions would have resulted based on the water volume discrepancies: a less than 0.5°F increase to the long-term peak suppression chamber temperature for the Design Basis Accident/Loss of Coolant Accident, a less than 0.3 ft. of water reduction in Net Positive Suction Head margin for the Residual Heat Removal and Core Spray System pumps, a peak local suppression chamber temperature of 198.1 °F (which is below the acceptable limits for the limiting NUREG-0783 event), negligible impact on the capability of achieving cold shutdown within 36 hours as required by Regulatory Guide 1.139, and an increase of less than 1°F in the peak suppression chamber temperature for ATWS. These results have been reviewed and determined to be acceptable.

Additional analyses (Appendix R Calculation 0B21-0080 Revision 1 and Engineering Service Request 96-00667 Revision 1) were performed to assess the impact of the actual suppression chamber water volumes on Appendix R and Station Blackout containment parameters. The results of these analyses indicate containment parameters remain within required limits.

PREVIOUS SIMILAR EVENTS

No previous similar events involving unit operation with suppression chamber water levels outside Technical Specification requirements has been reported.