



Carolina Power & Light Company

Brunswick Nuclear Plant
P. O. Box 10429
Southport, N.C. 28461-0429

MAR 16 1993

FILE: B09-13510C
SERIAL: BSEP-92-0038

10CFR50.73

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

BRUNSWICK STEAM ELECTRIC PLANT UNIT 1 AND 2
DOCKET NO. 50-325 AND 50-324
LICENSE NO. DRP-71 AND DPR-62
LICENSEE EVENT REPORT 1-93-005

Gentlemen:

In accordance with Title 10 of the Code of Federal Regulations, the enclosed Licensee Event Report is submitted. This report fulfills the requirement for a written report within thirty (30) days of a reportable occurrence and is submitted in accordance with the format set forth in NUREG-1022, September 1983.

Very truly yours,

C. C. Warren, Plant Manager Unit 2
Brunswick Nuclear Plant

GMT/gmt

Enclosure

cc: Mr. S. D. Ebnetter
Mr. P. D. Milano
Mr. R. L. Prevatte

9303220275 930316
PDR ADCK 05000325
S PDR

JE22

EXPIRES: 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), 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)

FACILITY NAME (1)

Brunswick Steam Electric Plant, Unit 1

DOCKET NUMBER (2)

05000325

PAGE (3)

1

TITLE (4)

REACTOR BUILDING STANDBY GAS TREATMENT THROTTLE VALVES ARE PREVENTED FROM THROTTLING FLOW TO WITHIN TECHNICAL SPECIFICATION LIMITS BY INITIATION LOGIC AND VALVE SETTINGS.

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
02	14	93	93	- 005 -	0	03	16	93	BSEP UNIT 2	05000324
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)							
POWER LEVEL (10)	0	20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)	
		20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)	
		20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER	
		20.405(a)(1)(iii)		X 50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		(Specify in Abstract and Text)	
		20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)			
		20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(ix)			

LICENSEE CONTACT FOR THIS LER (12)

NAME

Glen M. Thearling, Regulatory Compliance Specialist

TELEPHONE NUMBER

(919) 457-2038

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

X YES (If yes, complete EXPECTED SUBMISSION DATE)		NO		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
					6	30	93

ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single space typewritten lines) (16)

Both Units are in Cold Shutdown to support the Outages started on April 21, 1992.

On February 14, 1993, testing of Unit 1 Standby Gas Treatment (SBGT) showed that unthrottled flow of a single train would exceed the Technical Specification rated flow limit of 3300 cfm. The results of the as-found unthrottled flow for single SBGT train runs documented the 1A SBGT flow at 4050 cfm and the 1B SBGT flow at 3950 cfm. This puts the as-found flow for the individual SBGT train approximately 22% over the Technical Specification flow limit. This design deficiency affects both Units and has existed since original construction. During events initiating a Primary Containment Group 6 isolation signal the Reactor Building Intake throttle valves (D-BFV-RB and H-BFV-RB) receive a sealed-in full open signal.

With the flow exceeding the rated limit, the heater sizing needed to reduce humidity to 70% would not be met. Also, above the rated flow the 'residence time' of the air moving through the carbon adsorber may be less than the 0.25 seconds needed to ensure adequate adsorber 'capture time.' As indicated above, this condition is a concern when a single SBGT train fails to start and both intake throttle valves on the common suction path remain un-throttled. This issue will be resolved prior to declaring the Standby Gas Treatment Operable.

This design deficiency is similar to the issue reported in LER 1-92-20.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20585-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Brunswick Steam Electric Plant Unit 1	05000325	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2
		93	- 005 -	0	

TEXT (If more space is required, use additional NRC Form 366A's) (17)

TITLE

REACTOR BUILDING STANDBY GAS TREATMENT DESIGN HAS RESULTED IN THROTTLE VALVE LOGIC ALLOWING FLOW BEYOND TECHNICAL SPECIFICATION LIMITS.

INITIAL CONDITIONS

Both Units are in Cold Shutdown to support the Outages started on April 21, 1992.

EVENT NARRATIVE

On February 14, 1993, testing of Unit 1 Standby Gas Treatment (SBGT) using Special Procedure 1-SP-93-014, Flow Throttling of SBGT Filter Trains, showed that unthrottled flow of a single train would exceed the Technical Specification rated flow limit of 3300 cfm. The results of the as-found unthrottled flow for single SBGT train runs documented the 1A SBGT flow at 4050 cfm and the 1B SBGT flow at 3950 cfm. This puts the as-found flow for the individual SBGT train approximately 22% over the Technical Specification flow limit. This design deficiency affects both Units and is a concern because, during events initiating a Primary Containment Group 6 isolation signal, the Reactor Building Intake throttle valves (D-BFV-RB and H-BFV-RB) receive a sealed-in full open signal.

With the flow exceeding the rated limit, the heater sizing needed to reduce humidity to 70% would not be met. Also, above the rated flow the 'residence time' of the air moving through the carbon adsorber may be less than the 0.25 seconds needed to ensure adequate adsorber 'capture time.' As indicated above this condition is a concern when a single SBGT train fails to start and both intake throttle valves on the common suction path remain un-throttled.

CAUSE OF EVENT

The cause of the design deficiency is unknown and has existed since original construction.

CORRECTIVE ACTIONS

Design Engineering has prepared Engineering Evaluation Report (EER) 93-0216 to resolve this issue on both Units. This issue will be resolved prior to declaring the SBGT system Operable.

SAFETY ASSESSMENT

SBGT flow above the Technical Specification limit could result in an increased elevated release (monitored) made via the stack. The significance of this increase is still being evaluated, and the results will be included in a LER supplement.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Brunswick Steam Electric Plant Unit 1	05000325	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3
		93	- 005 -	0	

TEXT (If more space is required, use additional NRC Form 366A's) (17)

PREVIOUS SIMILAR EVENTS

A similar design issue was reported in LER 1-92-20.

EIIS COMPONENT IDENTIFICATION

System/Component

Standby Gas Treatment System

EIIS Code

BH