

# CP&L

Carolina Power & Light Company

Brunswick Nuclear Project  
P. O. Box 10429  
Souhport, N.C. 28461-0429  
January 3, 1991

FILE: B09-13510C  
SERIAL: BSEP/91-0002

10CFR50.73

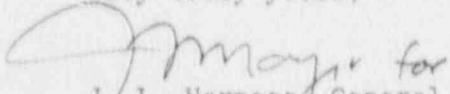
U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555

BRUNSWICK STEAM ELECTRIC PLANT UNIT 1  
DOCKET NO. 50-325  
LICENSE NO. DPR-71  
LICENSEE EVENT REPORT 1-90-027

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,

  
J. L. Harness, General Manager  
Brunswick Nuclear Project

WRT/

Enclosure

cc: Mr. S. D. Ebnetter  
Mr. N. B. Le  
BSEP NRC Resident Office

9101080365 910103  
PDR ADOCK 05000325  
S FDR

*BE22*  
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ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, 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)

01 OF 03

TITLE (4) Unexpected Engineered Safety Features Actuations While Hanging Clearance

EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQ. NO.	REV. NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
12	05	90	90	-	027	-	00	01	03	91	
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
5		20.402(c)		20.405(c)		X		50.73(a)(2)(iv)		73.71(b)	
POWER LEVEL (10)		20.405(a)(1)(i)									
000		20.405(a)(1)(ii)		50.36(c)(1)				50.73(a)(2)(v)		73.71(c)	
		20.405(a)(1)(iii)		50.36(c)(2)				50.73(a)(2)(vi)		OTHER (Specify in Abstract and Text)	
		20.405(a)(1)(iv)		50.73(a)(2)(i)				50.73(a)(2)(vii)(A)			
		20.405(a)(1)(v)		50.73(a)(2)(ii)				50.73(a)(2)(vii)(B)			
				50.73(a)(2)(iii)				50.73(a)(2)(x)			

LICENSEE CONTACT FOR THIS LER (12)

NAME WILLIAM R. TOLER, REGULATORY COMPLIANCE

TELEPHONE NUMBER

(919) 457-2701

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

MONTH

DAY

YEAR

YES (If yes, complete EXPECTED SUBMISSION DATE)

X

NO

DATE (15)

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

While hanging a clearance for a plant modification to relocate the position indication power source for the Drywell Floor and Equipment Drain Isolation Valves, an unexpected Reactor Building Ventilation Isolation, Containment Atmosphere Control Isolation (Group 6) and Standby Gas Treatment System "B" start occurred. Standby Gas Treatment "A" was under clearance for unrelated work. Subsequent print research revealed that this was the proper circuit response. There was no safety significance.

These systems actuated upon de-energizing the isolation logic. The cause of the event was inadequate clearance research. A thorough research of the logic prints to determine the clearances effects on plant equipment was not performed.

The affected circuits were re-energized to reset the Reactor Building Isolation and secure the Standby Gas Treatment System. Besides Operations Real-Time training on this event, corrective actions will include Licensed Operator Training on logic reading. Similar events resulting from inadequate clearance research have been reported in LERs 1-85-030, 1-85-036, 1-88-029, 1-88-034, 1-89-004, 1-89-015, 2-89-016 and 1-90-001.

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503

**LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION**

FACILITY NAME (1) Brunswick Steam Electric Plant Unit 1	DOCKET NUMBER (2) 05000325	LER NUMBER (6)				PAGE (3) 03 of 03
		YEAR 90	-	SEQUENTIAL NUMBER 027	-	

TEXT (IF MORE SPACE IS REQUIRED, USE ADDITIONAL NRC FORM 366A'S) (17)

CORRECTIVE ACTIONS

Involved Clearance Center personnel have been counseled.

Provide Operations Real-Time training on the importance of thorough research when hanging clearances, including the pitfalls of overreliance on "recommended" clearances.

Conduct additional Licensed Operator Training on electrical drawings with emphasis on logic print reading.

Review and revise (as appropriate) operations procedures (OP-03) to reference the effects of de-energizing circuit numbers CB5A and CB5B.

Review the circumstances of this event with appropriate Nuclear Engineering Department (NED) personnel.

In addition to the above corrective actions, a Human Performance Evaluation (HPES) will be performed and the results from this evaluation will be presented to management.

EVENT ASSESSMENT

There was no safety significance. The Reactor was defueled and the Secondary Containment Isolation function was not required operable. All systems responded as required. Similar events resulting from inadequate clearance research have been reported in LERs 1-85-030, 1-85-036, 1-88-029, 1-88-034, 1-89-004, 1-89-015, 2-89-016 and 1-90-001.

EIIS CODES

Standby Gas Treatment	BH/FLT
Secondary Containment Ventilation	VA/DMP
Isolation Dampers	
125 VDC Distribution panel	PL/BKR

*J May* 11/3/91  
PNSC Date

ATTACHMENT 1

LER 1-9Φ-Φ27 INFORMATION SHEET

Event Date 12-5-9Φ

Response Due Date 1-4-91

10CFR50.73 Reference (a)(2)(IV)

Event Reference(s) \_\_\_\_\_

Unexpected Engineered Safety Features  
Activations while hanging Clearances

Assigned To Bob Toler  
Lead Investigator

12-10-9Φ  
Date Assigned

Preparation, Review, Approval

A. \*Prepared by William D. Zobe 11/2/91 2701  
Lead Investigator Date Extension

\*Reviewed by W. D. Zobe 11-2-91  
Supervisor Date

\*Approved by [Signature] 11/2/91  
Regulatory Compliance Date

B. Reviewed by the following managers

\*Reviewed by\*\* \_\_\_\_\_ / \_\_\_\_\_  
Date

\*Reviewed by\*\* \_\_\_\_\_ / \_\_\_\_\_  
Date

\*Reviewed by\*\* \_\_\_\_\_ / \_\_\_\_\_  
Date

\*Comments made by other than the preparer should be indicated by that person's name next to the comments.

\*\*Reviews to be determined by Manager - Regulatory Compliance as necessary. (Input from or affecting other groups should be reviewed by the group's manager.)

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION  
COLLECTION REQUEST: 50.0 HRS. FORWARD  
COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS  
MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION,  
WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT  
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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		02 of 03
		90	-	027	-	

TEXT (IF MORE SPACE IS REQUIRED, USE ADDITIONAL NRC FORM 366A'S) (17)

### EVENT

Unexpected Reactor Building Ventilation Isolation, Containment Atmosphere Control Isolation (Group 6) and Standby Gas Treatment System "B" start.

### INITIAL CONDITIONS

Unit 1 was in mode 5 (Refueling) with the Reactor defueled and the Secondary Containment Isolation function was not required operable. Operations personnel were hanging clearances 1-90-2428 and 1-90-2432 for Plant Modification 90-012 to relocate the position indication power source for the Drywell Floor and Equipment Drain Isolation valves.

### EVENT DESCRIPTION

On December 5, 1990 at 1601, while hanging clearances 1-90-2428 and 1-90-2432 on the Reactor Protection System (RPS) power distribution panel C71-P001, an unexpected Reactor Building Ventilation Isolation, Containment Atmosphere Control Isolation (Group 6) and Standby Gas Treatment System "B" start occurred. These systems actuated upon de-energizing the RPS power distribution panel C71-P001 circuits CB5A and CB5B (except for train "A" Standby Gas Treatment which was out of service for unrelated work.) At 1605 operations personnel hanging the clearances were notified by the unit Shift Foreman that clearances 1-90-2428 and 1-90-2432 needed to be brought to the control room. Subsequent print research revealed that this was the proper circuit response and the actuations were appropriate. The affected circuits were re-energized to reset the Reactor Building Ventilation Isolation, restore Reactor Building Ventilation, and secure the Standby Gas Treatment System.

### CAUSE OF EVENT

The cause of this event was inadequate clearance research. A thorough research of the logic prints to determine the clearances effects on plant equipment was not performed by the involved Senior Reactor Operators.

### EVENT INVESTIGATION

Clearance Center preparations and reviews were performed independently by two NRC-Licensed personnel as required by AI-58 (Equipment Clearance Procedure); however, the effects of de-energizing distribution panel C71-P001 circuit numbers CB5A and CB5B were not fully determined. In reviewing the reference drawing 1-FP-55109, sheet number 7, the researchers failed to recognize the necessity of reviewing continuation sheet number 14, consequently three items were missed. Additionally, the Reactor Protection System operating procedure 1-OP-03 does not reference or note the effects of de-energizing these circuits. Other conditions, or causes, contributing to the inadequate clearance research was that the involved Clearance Center personnel relied upon the recommended clearances that were included in the plant modification. The recommended clearances listed the loads (as listed on 1-FP-55109 sheet 4) which would be affected by de-energizing the circuits but failed to mention Reactor Building Ventilation Isolation, Containment Atmosphere Control Isolation (Group 6) and actuation of the Standby Gas Treatment System. The clearance request (which was based upon the recommended clearances) referenced drawing 1-FP-55109 sheets 4 and 7, but did not reference sheet number 14.