



Carolina Power & Light Company

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

FEB 11 1994

SERIAL: BSEP-94-0048  
10CFR50.73

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

BRUNSWICK NUCLEAR PLANT UNIT 1  
DOCKET NO. 50-325/LICENSE NO. DRP-71  
LICENSEE EVENT REPORT 1-94-002

Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Part 50.73, Carolina Power & Light Company submits the enclosed Licensee Event Report. 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.

Please refer any questions regarding this submittal to Mr. G. M. Thearling at (910) 457-2038.

Very truly yours,

C. C. Warren, Director-Plant Operations (Acting)  
Brunswick Nuclear Plant

GMT/

Enclosures

1. Licensee Event Report
2. Summary of Commitments

cc: Mr. S. D. Ebnetter, Regional Administrator, Region II  
Mr. P. D. Milano, NRR Project Manager - Brunswick Units 1 and 2  
Mr. R. L. Prevatte, Brunswick NRC Senior Resident Inspector

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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNRB 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.

|                                                             |                               |                    |
|-------------------------------------------------------------|-------------------------------|--------------------|
| FACILITY NAME (1)<br>Brunswick Steam Electric Plant, Unit 1 | DOCKET NUMBER (2)<br>05000325 | PAGE (3)<br>1 of 3 |
|-------------------------------------------------------------|-------------------------------|--------------------|

TITLE (4)  
Control Building Emergency Air Filtration trains rendered inoperable by frozen/plugged instrument air dryer line.

| 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 |
| 01             | 17  | 94   | 94             | - 02 -            | 00              | 02              | 11  | 94   | BSEP Unit 2                   | 05000324      |
|                |     |      |                |                   |                 |                 |     |      | FACILITY NAME                 | DOCKET NUMBER |
|                |     |      |                |                   |                 |                 |     |      |                               | 05000         |

|                         |                                                                                                             |                  |                      |                                |  |  |  |  |  |  |
|-------------------------|-------------------------------------------------------------------------------------------------------------|------------------|----------------------|--------------------------------|--|--|--|--|--|--|
| OPERATING MODE (9)<br>5 | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following)(11) |                  |                      |                                |  |  |  |  |  |  |
| POWER LEVEL (10)<br>0   | 20.402(b)                                                                                                   | 20.405(e)        | 50.73(a)(2)(iv)      | 73.71(b)                       |  |  |  |  |  |  |
|                         | 20.405(a)(1)(i)                                                                                             | 50.36(c)(1)      | X 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)                                                                                           | 50.73(a)(2)(iii) | 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)(vi)                                                                                             | 50.73(a)(2)(ix)  |                      |                                |  |  |  |  |  |  |

LICENSEE CONTACT FOR THIS LER (12)

|                                                          |                                    |
|----------------------------------------------------------|------------------------------------|
| NAME<br>Glen M. Thearling, Regulatory Affairs Specialist | TELEPHONE NUMBER<br>(910) 457-2038 |
|----------------------------------------------------------|------------------------------------|

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)

|                                                    |   |    |                               |       |     |      |
|----------------------------------------------------|---|----|-------------------------------|-------|-----|------|
| YES<br>(If yes, complete EXPECTED SUBMISSION DATE) | X | NO | EXPECTED SUBMISSION DATE (15) | MONTH | DAY | YEAR |
|----------------------------------------------------|---|----|-------------------------------|-------|-----|------|

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

On January 17, 1994, Unit 1 was in a refueling outage and Unit 2 was at 100% power. At 0312, the common Control Building Heating Ventilation and Air Conditioning (CBHVAC) air conditioners tripped, followed by the CBHVAC Fans at 0330. By 0350, it was determined that the refrigerated instrument air dryer for the Control Building ventilation instrument air system was blocked. In this condition, successful operation of the CBHVAC system could not be assured under all conditions and the Control Building Emergency Air Filtration trains were inoperable.

Checks of air filters downstream of the refrigerated instrument air dryer found no contamination with foreign material, but the refrigerant charge pressure of the air dryer was low. The result of the low refrigerant pressure was internal dryer temperatures low enough to freeze the moisture being condensed in the instrument air line, thereby plugging the line. At 0430, the air dryer was bypassed and the Control Building ventilation system restarted.

A Preventive Maintenance route to check/maintain refrigerant pressure of the CBHVAC Instrument Air Dryer within the vendor recommended pressure range will be established.

The safety significance of this event is minimal as the passive failure did not occur during a challenge to Control Building Habitability.

The cause classification for this event per the criteria of NUREG-1022 is Management/Quality Assurance Deficiency.

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LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

| FACILITY NAME (1)                        | DOCKET NUMBER (2) | LER NUMBER (6) |                   |                 | PAGE (3) |
|------------------------------------------|-------------------|----------------|-------------------|-----------------|----------|
|                                          |                   | YEAR           | SEQUENTIAL NUMBER | REVISION NUMBER |          |
| Brunswick Steam Electric Plant<br>Unit 1 | 05000325          | 94             | - 02 -            | 00              | 2 of 3   |

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

TITLE

Control Building Emergency Air Filtration trains rendered inoperable by frozen/plugged instrument air dryer line.

INITIAL CONDITIONS

On January 17, 1994, Unit 1 was in a refueling outage and Unit 2 was at 100% power.

EVENT NARRATIVE

At 0312 on January 17, 1994, the common Control Building Heating Ventilation and Air Conditioning (CBHVAC) air conditioners tripped, followed by the CBHVAC Fans at 0330. By 0350, it was determined that the refrigerated instrument air dryer for the Control Building ventilation instrument air system was blocked, causing a loss of air pressure to the Control Building Ventilation controls. In this condition, successful operation of the CBHVAC system could not be assured under all conditions and the Control Building Emergency Air Filtration trains were inoperable.

Checks of air filters downstream of the refrigerated instrument air dryer found no contamination with foreign material, but the refrigerant charge pressure of the air dryer was low. The low refrigerant pressure (26 psig) corresponds to approximately 28 degrees Fahrenheit for the internal dryer temperature, low enough to freeze the moisture being condensed in the instrument air line into an ice plug. At 0430, the air dryer was bypassed and the Control Building ventilation system restarted.

Engineering Evaluation Report 94-0024 documented the acceptability of removing the air dryer from service for extended periods. When recharged, checks performed on the air dryer demonstrated it held its refrigerant charge.

CAUSE OF EVENT

Appropriate preventive maintenance for the refrigerated air dryer was not identified. The passive failure of the refrigerated air dryer resulted from a gradual decrease in refrigerant charge pressure during years of service.

CORRECTIVE ACTIONS

A Preventive Maintenance route to check/maintain refrigerant pressure of the CBHVAC Instrument Air Dryer within the vendor recommended pressure range will be established.

SAFETY ASSESSMENT

The safety significance of this event is minimal as the passive failure did not occur during a challenge to Control Building Habitability.

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 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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|                                          |                   |                |                   |                 |          |

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

PREVIOUS SIMILAR EVENTS

None

EIIS COMPONENT IDENTIFICATION

System/Component

EIIS Code

Control Building Control Complex Environmental Control System

VI

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 Preventive Maintenance route to check/maintain refrigerant pressure of the CBHAC Instrument Air Dryer within the vendor recommended pressure range will be established. | N/A                      |