

NON-PUBLIC?: N
ACCESSION #: 9507120187
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Brunswick Steam Electric Plant, Unit 1 PAGE: 1 OF 3

DOCKET NUMBER: 05000325

TITLE: DURING HIGH PRESSURE COOLANT INJECTION SYSTEM
SURVEILLANCE A GROUND WAS NOTED AFFECTING SYSTEM
INSTRUMENTATION.

EVENT DATE: 06/09/95 LER #: 95-13-00 REPORT DATE: 07/07/95

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: 1 POWER LEVEL: 100%

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR
SECTION:
5073(a)(2)(v)

LICENSEE CONTACT FOR THIS LER:
NAME: Glen M. Thearling, Regulatory
Affairs Specialist TELEPHONE: (910) 457-2038

COMPONENT FAILURE DESCRIPTION:
CAUSE: SYSTEM: COMPONENT: MANUFACTURER:
REPORTABLE NPRDS:

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

At 0007 on June 9, 1995, Technical Specification surveillance OPT-9.2 High Pressure Coolant Injection (HPCI) Operability Test, was in progress when a ground associated with the HPCI barometric condenser vacuum pump resulted in a ground on the "A" Battery Bus. This caused indication of turbine speed to increase and indicated system flow to decrease. Actual turbine speed and flow conditions remained constant as HPCI was in manual. The surveillance was secured and HPCI was declared inoperable. The cause of the ground was attributed to lubricating beyond the vendors recommended frequency, resulting in lubricant, paint chips and graphite within the motor's commutator area. This debris was removed from the motor commutator surfaces, the HPCI surveillance was run satisfactorily and HPCI was declared operable at 0400 on June 10, 1995. The reason the ground interfered with the turbine speed/flow circuitry was that the

replacement of the Unit 1 GEMAC controller with a Johnson Yokagawa controller (PM 92-079), during the last refueling outage, eliminated an input to output signal isolation feature present with the previous controller.

This condition was found during a routine surveillance and is of minimal safety significance since the Automatic Depressurization System (ADS), Core Spray, and the Low Pressure Coolant Injection systems were operable. HPCI remained available for manual operation. The cause classification for this event per the criteria of NUREG-1022 is Design.

END OF ABSTRACT

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TITLE

DURING HIGH PRESSURE COOLANT INJECTION SYSTEM SURVEILLANCE A GROUND WAS NOTED AFFECTING SYSTEM INSTRUMENTATION.

INITIAL CONDITIONS

Unit 1 was at 100% reactor power with all Engineered Safety Feature systems operable.

EVENT NARRATIVE

At 0007 on June 9, 1995, Technical Specification surveillance OPT-9.2 High Pressure Coolant Injection (HPCI) Operability Test, was in progress when a ground associated with the HPCI barometric condenser vacuum pump motor resulted in a ground on the "A" Battery Bus. This caused indication of turbine speed to increase and indicated system flow to decrease. Actual turbine speed and flow conditions remained constant as HPCI was in manual. The surveillance was secured and HPCI was declared inoperable, while the source of the ground was investigated. An excess of lubricant/debris in the motor commutator area was determined to be the source of the ground. The motor commutator surfaces were cleaned, the HPCI surveillance was run satisfactorily and HPCI was declared Operable at 0400 on June 10, 1995.

CAUSE OF EVENT

The replacement of the GEMAC controller with a Johnson Yokagawa (JYC) controller (PM 92-079) had eliminated an input to output signal isolation feature present with the previous controller, when installed during the

refuel outage (B110R1) that ended May 22, 1995.

Initiating this event was a ground that was established in the HPCI barometric condenser vacuum pump motor. This ground originated from too frequent lubrication, resulting in lubricant, paint chips and graphite within the motor commutator area. The resultant unisolated ground interfered with the speed and flow indications.

CORRECTIVE ACTIONS

Controller ground interference - A temporary modification (ESR 9500981) was developed to provide protection from a ground induced current loop (lift the leads to the Emergency Response Facilities Information System (ERFIS) computer point that monitors HPCI flow) that could result from a breakdown of a component in the circuitry for the ERFIS computer point that monitors HPCI flow. A permanent solution being pursued will install an input to output signal isolation device to isolate the control circuit wiring from potential ground current loops associated with the plant 250 volt batteries.

TEXT PAGE 3 OF 3

The Engineering Section was recently reorganized to more closely integrate the design and system engineering functions. To ensure significant engineering products are developed and implemented in a manner which includes a comprehensive plant perspective, a group of knowledgeable individuals representing appropriate site organizations (i.e. Engineering Management, Operations, Maintenance, etc.) is being established to review significant engineering products. This group is to perform this function until the quality of engineering products are consistent with expectations of this group.

Lubrication program controls will be reviewed in relation to the vendor manual recommendations for the barometric condenser vacuum pump and condensate pump motor applications.

The HPCI and RCIC barometric condenser vacuum pump and condensate pump motor commutators will be inspected for deposits.

SAFETY ASSESSMENT

This condition was found during a routine surveillance and is of minimal safety significance since the Automatic Depressurization System (ADS), Core Spray, and the Low Pressure Coolant Injection systems were operable. HPCI remained available for manual operation.

PREVIOUS SIMILAR EVENTS

None

EIIS COMPONENT IDENTIFICATION

System/Component EIIS Code

High Pressure Coolant Injection System BJ

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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.

Committed

Commitment date or
outage

1. A permanent solution being pursued that will 12/31/95 install an input to output signal isolation device to isolate the control circuit wiring from potential ground current loops associated with the plant 250 volt batteries.
2. To ensure significant engineering products 8/30/95 are developed and implemented in a manner which includes a comprehensive plant perspective, a group of knowledgeable individuals representing appropriate site organizations (i.e. Engineering Management, Operations, Maintenance, etc.) is being established to review significant engineering products. This group is to perform this function until the quality of engineering products are consistent with expectations of this group.
3. Lubrication program controls will be reviewed 11/30/95 in relation to the vendor manual recommendations

for the barometric condenser vacuum pump and condensate pump motor applications.

4. Inspect HPCI and RCIC barometric condenser 6/30/96 vacuum pump and condensate pump motor commutators for deposits.

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CP&L

Carolina Power & Light Company
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JUL 07 1995

SERIAL: BSEP-95-0319
10 CFR 50.73

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. DRP-71
LICENSEE EVENT REPORT 1-95-013

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. M. A. Turkal at (910) 457-3066.

Very truly yours,

W. Levis, Plant Manager
Brunswick Nuclear Plant

gmt/

Enclosures

1. Licensee Event Report
2. Summary of Commitments

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

*** END OF DOCUMENT ***
