



Carolina Power & Light Company

Brunswick Steam Electric Plant

P. O. Box 10429

Southport, NC 28461-0429

September 25, 1985

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SERIAL: BSEP/85-1708

Dr. J. Nelson Grace, Administrator  
U.S. Nuclear Regulatory Commission  
Suite 2900  
101 Marietta Street NW  
Atlanta, GA 30323

BRUNSWICK STEAM ELECTRIC PLANT UNITS 1 AND 2  
DOCKET NOS. 50-325 AND 50-324  
LICENSE NOS. DPR-71 AND DPR-62  
RESPONSE TO INFRACTIONS OF NRC REQUIREMENTS

Dear Dr. Grace:

The Brunswick Steam Electric Plant (BSEP) has received I&E Inspection Report 50-325/85-24 and 50-324/85-24 and finds that it does not contain information of a proprietary nature.

This report identified one violation that appeared to be in noncompliance with NRC requirements. Enclosed please find Carolina Power & Light Company's response to that violation.

Very truly yours,

C. R. Dietz, General Manager  
Brunswick Steam Electric Plant

RMP/ag

Enclosure

cc: NRC Document Control Desk

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## Violation

Technical Specification 6.8.1.a requires written procedures be implemented covering procedures recommended in Appendix A of Regulatory Guide 1.33, November 1972. Item A.10 requires procedures be established for bypass of safety functions and jumper control.

Administrative Instruction AI-59, Jumpering, Wire Removal, and Designated Jumper, requires that the Operations Engineer report to the Plant Nuclear Safety Committee (PNSC) monthly concerning the status of both safety and nonsafety-related jumpers and wire removals. AI-59 also requires the Manager - Maintenance and Manager - Technical Support to report monthly on the status of trouble tickets and Engineering Work Requests, respectively, required to remove jumpers or reterminate wire removals.

Contrary to the above, AI-59 was not implemented in that the Operations Engineer only reports the status of jumpers/wire removals listed in the Jumper and Wire Removal Log, and the Manager - Maintenance and Manager - Technical Support do not report the status of trouble tickets and Engineering Work Requests required to remove jumpers or reterminate wire removals.

This is a Severity Level IV violation (Supplement I).

## Response

### I. Admission or Denial of the Alleged Violation

Carolina Power & Light acknowledges that AI-59 was not properly implemented in that the Operations Engineer only reported those jumpers/wire removals listed in the Jumper and Wire Removal Log and the Manager - Maintenance did not report the status of trouble tickets required to remove jumpers or reterminate wire removals. As noted in Attachment 1 (item 7), the Manager - Technical Support has been reporting the status of Engineering Work Request required to remove jumpers or reterminate wire removals; therefore, this portion of the violation is denied. Attachment 1 indicates that only nonsafety-related items are reported, however, the report identifies both safety and nonsafety jumpers.

### II. Reason for the Violation

The intent of paragraph 4.6 (enclosed) to AI-59 was to report the status of those jumpers and wire removals identified in the Jumper and Wire Removal Log to PNSC on a monthly basis. Likewise, the intent of paragraph 4.7 (enclosed) was to have the managers of Maintenance and Technical Support report the status of those jumpers/wire removals which were logged and under the control of either trouble tickets or Engineering Work Request. In addition, paragraphs 3.5 and 4.13 (enclosed) state that jumpers/wire removals established by trouble tickets need not be tracked by the Jumper and Wire Removal Log if certain conditions are met. Based on the intent of the procedure and paragraph 4.13, neither the Manager - Maintenance nor the Operations Engineer were reporting the status of jumpers/wire removals tracked by trouble tickets to PNSC.

### III. Corrective Steps Which Have Been Taken

This event was reviewed by plant management on September 12, 1985. This review included discussion about the intent of the procedure and how reporting requirements are confusing as written. Due to the commitment to revise the procedure, no additional corrective actions were deemed necessary.

### IV. Corrective Steps Which Will Be Taken

AI-59 will be revised to more accurately reflect the intent of the procedure as it relates to PNSC reviews of the status of jumpers/wire removals. In addition, the status of systems affected by jumpers installed by trouble tickets will be reported to PNSC at the September regular meeting and future regular PNSC meetings until clarification of the procedure is affected.

### V. Date Full Compliance Will Be Achieved

Full compliance will be achieved by November 1, 1985.

## Attachment 1

Example of Monthly PNSC Meeting Minutes Documenting  
Operations and Technical Support Jumper Reporting

1. Reviewed updated status of LCOs, fire protection LCOs, disabled annunciators, and annunciators in alarm for Units 1 and 2 per attached sheets.
2. Reviewed current status of OG-08s and safety and nonsafety-related jumpers/wire removal for Units 1 and 2 per attached sheets.
3. Approved the following jumper and wire removal approvals:

<u>Index No.</u>	<u>System</u>
a. S1-85-046	Rod Block
b. S1-85-047	PCIS
c. S1-85-048	Reactor Building Isolation SBTG Start
d. S1-85-049	Rod Block
e. S1-85-050	Refuel
f. S1-85-051	Annunciator

4. Quality Assurance presented monthly report on NCRs, field reports, NODs, and Attachment 1 - Semiannual PNSC Report per attached report.
5. ALARA subcommittee representative presented and discussed ALARA problem report follow-up log and comments per attached log.
6. Reviewed MST project status as of June 26, 1985, per attached sheet and graph.
7. Technical Support presented monthly pump and valve status for Units 1 and 2 per the attached sheet; and received nonsafety-related jumper and lifted wires report per the attached report.
8. On-Site Nuclear Safety presented statistical analysis of procedure revisions by month delineated by subunit per attached sheets.
9. Regulatory Compliance submitted current data of open, closed, extended, and added action items; LERs by cause code; LERs by month; LER averages; violations by severity level; violations; inspector hours; and special reports per attached sheets.

Chairman adjourned meeting and will reconvene June 28, 1985.

### 1.0 Purpose

The purpose of this procedure is to:

1. Provide instructions which ensure positive control over designated jumpers.
2. Define the conditions under which electrical current alterations may be made without the authority of a plant modification.
3. Provide instructions for the use of jumpers and wire removal tags, the installation and removal of safety-related and nonsafety-related jumpers and identification and control procedures relating to designated jumpers.

### 2.0 Responsibility

The responsibility for implementing this procedure lies with the BSEP Operations Subunit.

NOTE: It is the policy of this plant that the use of jumpers and lifted leads will be minimized. When use of jumpers and lifted leads cannot be avoided, efforts shall be made to expeditiously restore the system to a normal, as designed, configuration.

### 3.0 Applicability

3.1 Jumper and wire removal procedures shall be used when:

1. An electrical component or circuit is out of service, disabling a desired plant component.
2. The electrical component will be out of service an extended period.
3. The SF/SOS determine that it is desirable to reestablish power or control to the desired plant component by installing a jumper or lifting a lead.
4. The SF/SOS determine that it is possible to reestablish power or control to the plant component by installing a jumper or lifting a lead.

3.2 The jumper and wire removal forms and log shall be used to document circuit alterations which disable annunciators or annunciator features.

3.3 Jumper and wire removal procedures, Sections 6 and 7 of this procedure, shall not be used to support plant modification activities. Installation and removal of jumpers to support a modification shall be in accordance with the approved plant modification.

- 3.4 Designated jumpers and/or wire removal tags shall be used in circuit alterations which are authorized by procedures other than this procedure. (See Section 3.5.) Jumpers other than designated jumpers shall not be used in circuit alteration which are authorized by procedures other than this procedure. (See Section 3.5)
- 3.5 Jumpers and wire removals may be authorized and documented using the administrative controls implemented by the following procedures in lieu of this procedure. If any of these controls are utilized, the individuals performing the jumpering or wire lift activities shall log the equipment affected and work order in the Control Room (Equipment Removed From Service Log, Attachment G). This log shall be located at the Control Room window next to the completed trouble ticket log. When the equipment is returned to service, the log shall be dated and signed in the appropriate blocks by the individual restoring the equipment.
- a. Specific written procedures contained in documents, such as periodic tests, maintenance instructions, engineering evaluations, etc. These procedures will have procedural steps, with sign-offs, for installation and removal of jumpers, or removal and reinstallation of wires, including independent verification where appropriate.
  - b. Specific written instructions on a Work Request & Authorization Form (trouble ticket) associated with approved corrective maintenance instructions. This will normally involve disconnecting motors, instruments, or other electrical equipment to perform corrective maintenance or troubleshoot the equipment. Documentation of restoration, including independent verification where required in accordance with POM Vol. I, Section 11.7, must be included on the Work Request & Authorization Form.
  - c. Specific written instructions in a plant modification associated with acceptance testing or troubleshooting associated with the plant modification. Documentation must be included in the plant modification to verify restoration, including independent verification where appropriate.
  - d. Plant Clearance Procedure AI-58.
- 3.6 Jumpers and wire removals shall not be authorized in technical specification related systems when the system is required to be operable unless the jumper or wire removal has no impact on the safety function. A safety analysis in accordance with 10CFR50.59 shall be performed by the Shift Technical Advisor for any jumper or wire removal in a technical specification related system regardless of whether or not the system is required operable at the time of jumpering or wire removal. If any question on the safety analysis is answered yes, then the appropriate approvals, as specified in paragraph 2.5 of RCI-03.1, are required prior to implementing the procedure. The completed safety analysis shall be fastened to Attachment 1, Jumper and Wire Removal Approval.



- 3.7 Jumper and wire removal tags shall not be used in place of a clearance. No work shall be performed on a system component made inoperable using this procedure unless personnel and equipment safety are assured using the clearance procedures.

#### 4.0 General Requirements

NOTE: Since it is the policy of the plant to minimize the use of jumpers and lifted leads, when use of jumpers or lifted leads cannot be avoided, efforts shall be made to expeditiously restore the system to a normal, as-designed configuration.

- 4.1 Trouble tickets written which are required to remove a jumper or reterminate a lifted wire shall be assigned priority 1A.
- 4.2 EWRs written to resolve a problem requiring a jumper or lifted wire shall be marked: "Work needed to remove jumper \_\_\_\_." This shall be done by the EWR initiator, usually the Operations Engineer.
- 4.3 The Shift Foreman's Jumper and Wire Removal Log will be kept permanently in the Control Room except for special management reviews.
- 4.4 The Shift Foreman's log will contain one entry per day, normally by the 00-08 Shift Foreman at the beginning of his shift, noting safety system alteration status. This need be only the number of jumpers/wire removals taken from the jumper log (Safety/Technical Specifications-Related Systems section). This entry will ensure ongoing awareness of alterations on the part of the Shift Foreman.
- 4.5 Circuit alterations shall be removed with proper authority immediately upon cessation of need. Functional restoration of safety-related systems, if applicable, shall be completed in accordance with approved procedures.
- 4.6 The Operations Engineer shall report to PNSC monthly concerning the status of both safety and nonsafety-related jumpers and wire removals.
- 4.7 The Manager - Maintenance shall report to PNSC monthly on the status of trouble tickets, and the Manager - Technical Support shall report to the PNSC monthly on the status of Engineering Work Requests required to remove jumpers or reterminate wire removals. This report shall commence on the first month after the jumper is first reported to PNSC by the Operations Engineer.
- 4.8 Trouble tickets and EWRs which must be worked to remove jumpers or reterminate wire removal will be tracked on a PNSC Action Item List if the jumper wire removal is in effect for more than six months.
- 4.9 When annunciators are disabled per OI-05 by pulling the annunciator card, in lieu of a tag, a red dot shall be placed on the annunciator window and a notation, "Window XX-XX-XX red dot," shall be made in block 9 of

Attachment A or in block 5 of Attachment C. When an annunciator audible alarm feature is altered per OI-05 by installation of a modified card, in lieu of a tag, a yellow dot shall be placed on the annunciator window and a notation, "Window XX-XX-XX yellow dot," shall be made in block 9 of Attachment A or in block 5 of Attachment C.

- 4.10 When an annunciator has been disabled by pulling the annunciator card, the red dot shall be removed immediately upon reinserting the card to enable the annunciator. When an annunciator circuit has had its audible alarm feature altered per OI-05, the yellow dot shall be removed immediately upon restoring the audible alarm feature to normal.

- 4.11 Reterminations in Q-list, Fire Protection Q-list, Radwaste Q-list, or technical specification-related systems require independent verification of the retermination per drawings by QC or the Operations Subunit following verification by the individual.

This does not apply to momentary lifts that are performed during corrective maintenance. In all cases where more than two wires are lifted, verification by QC or the Operations Subunit of proper retermination per applicable drawings is required.

- 4.12 Wire removal tags will be placed on each wire or group of wires in a single cable that is lifted from its terminal, except when momentary removals are necessary and the technician does not leave the area until the wire is again terminated. If the momentary lift is not covered by a procedure providing independent verification, Figure 11.7.1 of Volume I, Book 1, will be used to document independent verification consistent with Volume I, Book 1, Section 11.7.

- 4.13 Use of the wire removal tags for corrective maintenance will not be required to be entered in the Jumper and Wire Removal Log, but the use will be required to be documented on the trouble ticket and the wire removal tags shall be attached to the trouble ticket at completion of the job. The wire removal tag will be identified by recording the trouble ticket number on the tag along with the required information. Wire removal tags used for corrective maintenance shall be documented using Sections 6 and 7 of this procedure if the work order is to be closed out with wires remaining lifted or jumpers installed.

- 4.14 A jumper and wire removal tag will be hung with each electrical jumper and with each wire or group of wires removed from their terminations. A minimum of one tag will be used for each group of wires in a single cable that has been lifted.

The use of a single tag to identify a group of wires in a single cable shall be authorized only when it is determined by the Shift Foreman that it will be impossible to incorrectly reterminate the