



Carolina Power & Light Company

Brunswick Nuclear Project
P. O. Box 10429
Southport, N.C. 28461-0429
December 20, 1990

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SERIAL: BSEP/90-0837

10CFR2.201

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

BRUNSWICK STEAM ELECTRIC PLANT UNITS 1 AND 2
DOCKET NOS. 50-325 AND 50-324
LICENSE NOS. DPR-71 AND DPR-62
REPLY TO A NOTICE OF VIOLATION

Gentlemen:

The Brunswick Steam Electric Plant (BSEP) has received NRC Inspection Report 50-325/90-43 and 50-324/90-43 and finds that it does not contain information of a proprietary nature.

This report included a NOTICE OF VIOLATION. Enclosed is Carolina Power & Light Company's response to that NOTICE OF VIOLATION.

Very truly yours,

J. L. Harness, General Manager
Brunswick Nuclear Project

TH/

Enclosure

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

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II. VIOLATION RESPONSE

A. Admission or Denial of the Violation

Brunswick Steam Electric Plant agrees that, on September 20, 1990, a high radiation area door was found open by our staff during a routine high radiation area door inspection. We also agree that this is a violation of Technical Specification 6.12.2, which requires that each high radiation area, in which the radiation intensity is greater than 1,000 millirem per hour, have locked doors to prevent unauthorized entry. However, we do not agree that this incident is indicative of a failure to take adequate corrective measures to preclude recurrence of high radiation doors being left open.

Previous incidents of high radiation area doors being left open have been the result of personnel not adequately verifying that the door(s) were closed behind them upon exiting an area. Discussions with the involved individuals in the September 20, 1990 event, along with verification of the condition of the door, have shown that the primary causal factor involved in this event was the condition of the door, i.e., the door framing was found to be in a condition that, although the individuals pulled on the door to verify it was closed, the door frame condition made it feel like it was closed, even though it was in fact jammed in a partially open position.

In addition, actions taken to correct the situation have been both prompt and effective since implementation. As stated in NRC Inspection Report (IER) 50-324, 325/90-34, the August 3, 1990 event was prior to the full implementation of the corrective actions deemed necessary as a result of the violation issued in NRC Inspection Report 90-06. Since the August 3, 1990 event, there have been no further events involving personnel error; therefore, CP&L feels that the actions taken as a result of the violation identified in NRC IER 90-06, which delineate the importance of personnel self-checking, have been effective in controlling the high radiation door events involving personnel error. The actions described in Sections IIC and IID of this response, detail an effective plan to correct and prevent recurrence of the events relative to the September 20, 1990 high radiation door incident.

B. Reason for the Violation

Investigation of this event, performed under Plant Incident Report 90-070, has determined that the root cause of the 9/20/90 event was the malfunction of the door frame and locking mechanism. The door latching

mechanism was found to be defective in that the latching bolt did not spring back to the latched position as designed, such that the door would not automatically latch and lock upon closure. In addition, a length of angle iron welded to the door for support was catching the door jam upon closure, giving the appearance and feel that the door latched when closed. The operator stated that he had, in fact, checked the door upon entry to the area, but that the above factors made the door appear to be closed and locked.

C. Corrective Steps Which Have Been Taken and Results Achieved

As a result of the September 20, 1990 event, the following corrective actions were implemented:

1. A sign reading "Emergency Use Only" was placed on each side of the door as a temporary measure, until repairs could be made.
2. The latching mechanism and door were repaired.
3. As a result of a Plant General Manager Directive issued on October 9, 1990, control of all locked high radiation area entries (except for emergency use), including door unlocking and verification of door relocking following job completion, has been delegated to Health Physics personnel.

The above measures have proven effective in preventing any additional high radiation area door violations since implementation.

D. Corrective Actions To Be Taken To Prevent Recurrence and Date of Full Compliance

Gate entries, such as the one involved with the September 20, 1990 event, have been a potential concern due to the design of the gates and the fact that the gates do not have self-closure devices. As a result, Engineering Work Request (EWR) 07455 was developed to resolve the problems associated with these gates, by replacing the existing gates with gates that have substantially reinforced self-closure and self-locking mechanisms. Sixteen areas were originally determined to need the reinforced gates (see Attachment 1). Additionally, two gates in the Radwaste drum room and Radwaste solidification area have been determined to need replacement. The replacement packages for the remaining two Radwaste area gates are expected to be completed by the end of February, 1990. The Unit 1 Turbine Building gates (total of four gates) are expected to be completed by the end of the current Unit 1 outage (current completion date scheduled for March 13, 1991),

but will be completed no later than the end of June 1991. The remaining gates are expected to be completed by the end of June, 1991.

CP&L feels that the measures taken as a result of the September 20, 1990 event make the BSEP plant in full compliance with 10 CFR 20 and the BSEP Technical Specifications with regard to control of locked high radiation area entries. The replacement of the currently installed gates with gates having substantially reinforced self-closure and self-locking mechanisms is being viewed as an enhancement, and possible alternative, to current administrative controls.

ATTACHMENT 1

LOCKED HIGH RADIATION AREA GATES BEING REPLACED AT BSEP

<u>AREA</u>	<u>GATE</u>
UNIT 1 TURBINE BUILDING	70' ENTRIES TO MSR AREA (FOUR)
UNIT 2 TURBINE BUILDING	70' ENTRIES TO MSR AREA (FOUR)
UNIT 1 REACTOR BUILDING	80' FUEL POOL HEAT EXCHANGER AREA (TWO)
UNIT 2 REACTOR BUILDING	80' FUEL POOL HEAT EXCHANGER AREA (TWO)
UNIT 1 REACTOR BUILDING	77' RWCU BWRT PUMP ROOM (ONE)
UNIT 2 REACTOR BUILDING	77' RWCU BWRT VALVE AREA (ONE)
RADWASTE BUILDING	-3' ENTRANCE TO RWCU PHASE SEPARATOR AREA (ONE)
RADWASTE BUILDING	-3' ENTRANCE TO WASTE SLUDGE SKID AREA (ONE)
RADWASTE BUILDING	DRUMMING ROOM INTERIOR STORAGE AREA (ONE)**
RADWASTE BUILDING	SOLIDIFICATION AREA (ONE)**

** DENOTES AREAS THAT THE REPLACEMENT PACKAGES HAVE NOT BEEN COMPLETED