CP&L
Carolina Power & Light Company

Brunswick Nuclear Project
P. O. Box 10429
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December 7, 1990

FILE: B09-13510C 10CFR2.201
SERIAL: BSEP/90-0817

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
SUPPLEMENTAL REPLY TO A NOTICE OF VIOLATION (EA 90-130)

Gentlemen:

On November 13, 1990, the Brunswick Steam Electric Plant (BSEP) received a letter from the Office of Enforcement concerning NRC Inspection Report 50-325/90-025 and 50-324/90-025. The letter, dated November 8, 1990, acknowledged receipt of our response to the Notice of violation contained in that Inspection Report, and our payment of the associated civil penalty imposed by the NRC. The letter requested additional information relative to the methods to meet personnel qualification and work control requirements. Attached is the supplemental information requested by the NRC Staff.

The letter also stated that the NRC Staff is continuing its review of assigned extremity dose for the worker involved in this event. The NRC Staff requested that CP&L provide an estimate of uncertainty associated with the extremity dose calculations with the response to the above issues. A copy of Dosimetry Technical Report 90-05, Brunswick TIP Incident Dose Calculations, dated November 30, 1990, is also enclosed. If you have any further questions concerning this issue, please contact me.

Very truly yours,

J. L. Harness, General Manager
Brunswick Nuclear Project

TH/

Enclosures

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

IE14
4/1

bcc: Mr. R. M. Coats
Mr. C. W. Crawford
Mr. A. B. Cutter
Mr. W. J. Dorman
Ms. R. S. Gatewood
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Mr. M. D. Hill
Mr. M. A. Jones
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Mr. A. M. Lucas
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ATTACHMENT 1

Supplemental Response To NRC Inspection Report 50-325 & 324/90-25

By letter dated November 8, 1990, the NRC requested a supplemental response to NRC Inspection Report 50-325/90-25 and 50-324/90-25, concerning the July 5, 1990 Traversing In-Core Probe (TIP) event. The NRC staff requested that we address the methods to meet personnel qualification and work control requirements, including measures taken or to be taken involving interactions and coordination of work controls between the major site work groups. This attachment addresses the issues requested by the NRC staff.

I. Methods to Meet Personnel Qualification

As stated in the CP&L Response to Notice of Violation, dated October 1, 1990 (NLS-90-203), qualification of contract personnel involved in modification work is ensured through the reading and understanding of applicable procedures, pre-job briefings, and supervision adequately instructing personnel on assigned activities and overseeing their actions. For modification activities, the Outage Management and Modification (OM&M) Project Manager has responsibility for all aspects of his/her assigned projects. As such, the Project Manager is expected to ensure the interaction and coordination of work controls between site work groups involved in his/her project are adequate. Following the July 5, 1990 event, Real Time Training and review of this incident was completed by site personnel, including OM&M project managers, engineers, and supervisory personnel. The review addressed the generic implications of verifying personnel remain sensitized to working critical or complex evolutions, including using qualified personnel to perform tasks, and completion of task reviews and briefings prior to task initiation. The review emphasized the importance of pre-job reviews in ensuring personnel performing the tasks are properly qualified.

Procedural guidance has been provided to the Project Managers in regards to their required research of industry events prior to project implementation. Additional guidance is planned for incorporation into the OM&M Instruction Manual. The guidance will cover the steps to be taken by the Project Managers in ensuring OM&M Projects and Modification Support contract personnel receive the specific training required to perform the task at hand. The specific training for the contract personnel involved in modification work is the required reading and understanding of applicable procedures, pre-job briefings, and supervision providing adequate instructions pertaining to their assigned activities and overseeing their actions. Revisions to the Instruction Manual are expected to be completed by March 31, 1990. In addition, the Brunswick Plant has developed training that is aimed at reducing Human Error at the site. The training emphasizes work environment conditions affecting human error, and increasing sensitivity of project personnel. This training is being given to permanent CP&L employees and contractors (those on-site greater than six months).

II. Interaction and Coordination of Work Controls

As stated in Part I, the OM&M Project Manager is responsible for ensuring the interaction and coordination of work controls between site work groups involved in his/her project are adequate. Immediately following this event, the Manager of OM&M evaluated on-going modification activities to ensure that adequate work control procedures were in place for modification implementation. The Real Time Training and review of this incident given to the OM&M Project Managers included addressing the

generic implications of proper completion of task reviews and briefings prior to task initiation. In addition, the planned revision of the OM&M Instruction Manual will address the responsibility of the Project Manager in ensuring the proper interactions and coordination of work controls between site work groups is defined and in place prior to project implementation.

Improving interaction and coordination of work controls between site groups has been given considerable resources by Site Management in the last six months. The Human Error Training noted previously emphasizes the importance of both written and verbal communication as barriers against human errors. The "Conduct of Operations" philosophy statements in procedures of appropriate organizations have been revised to express that one aspect of correct preplanning of work activities includes research of prior industry events for application to the upcoming work activity. Operations has instituted pre-evolution briefings for infrequent and major tasks, per the guidance of a memorandum issued by the acting Manager of Operations. Maintenance now conducts daily job briefings and debriefs, in accordance with the guidance of Maintenance Policy Notice 90-017. OM&M has implemented task reviews and briefings prior to task initiation.

The position of Shift Manager has been created to more effectively coordinate site activities between work groups. This management position is responsible for coordinating and providing oversight among interfacing work groups at Brunswick to ensure that an appropriate level of sensitivity exists regarding nuclear and industrial safety, dose reduction, work control, and established schedules. The primary responsibility is to promote effective communications among work groups and management. The Shift Manager's duties include attending important meetings, monitoring key work activities, touring the plant protected areas on a regular basis, and investigating significant emergent problems in the plant.

An interdepartmental procedure has been developed to establish a division of responsibilities for the maintenance of substation, relay, and control equipment in order to achieve a high degree of equipment operational reliability, and to promote strong interdepartmental communications, which will preserve the efficiency of the maintenance tasks undertaken at the CP&L Generating Plants. The procedure provides for an interface agreement between the Transmission Department, Fossil Operations Department, Robinson Nuclear Project, Harris Nuclear Project, and Brunswick Nuclear Project.

An interdepartmental procedure has also been developed to divide the responsibilities with respect to maintenance of the 24kV underground system from the Brunswick Plant to the Caswell Beach pumping station. This procedure provides for an interface agreement between the Brunswick Nuclear Project, the Wilmington Area Transmission Maintenance, and the Customer and Operating Services Department-Eastern Division.

A Maintenance Clearance Resource Center (MCRC) was developed for the current Unit 1 Refuel Outage. The MCRC identifies, reviews, develops and sequences maintenance work activities with regard to outage system window milestones, considering the impact of testing, maintenance, and modifications. The group has significantly reduced the number of tags required for several clearances, which will reduce Operations' man-hours and radiation exposure. Detailed sequencing of tasks involved in removing a particular system from service, the sequence of work activities, and return of system to service is developed and provided to Operations, along with a detailed clearance request which includes drawings, recommended system boundaries, and procedures. Maintenance is currently investigating

the possibility of maintaining the MCRC during plant operations to provide integrated planning for the Site Work Force Control Group (SWFCG).

BSP-43, Brunswick Site Work Force Control Group Process Procedure, is being developed to replace current SWFCG guidelines. The procedure more thoroughly defines responsibilities of the SWFCG participants, and is being developed to more effectively control work conducted by various work groups, including scheduled, nonscheduled, and emergent work items. The SWFCG committee includes representatives from Operations, Mechanical and I&C/Electrical Maintenance, Environmental & Radiation Control, Technical Support, Control & Administration, OM&M, Quality Assurance and Radwaste/Fire Protection groups. The new procedure provides for a checklist for initiation of plant modification work under Limited Conditions for Operation or removal of system and equipment from service, as an aid to impacted groups. The procedure also contains a list of questions to consider answering prior to sending a Work Request/Job Order to the Control Room, including such items as potential consequences of performing the job incorrectly, consequences of potential instrument trips, equipment affected by electrical circuits being checked, and communication that is required with other groups during the performance of the particular job.

The considerable efforts of the site work groups in the area of work control and communication are readily demonstrated by the current status of the Unit 1 Refuel Outage, begun in September, 1990. This outage, which includes replacement of portions of the Recirculation System piping, is nine days ahead of schedule as of December 3, 1990. The work coordination efforts of site groups is the primary reason for the outage being ahead of a demanding schedule.

III. Conclusions

The site efforts during the current Unit 1 Refuel Outage show significant progress in work control efforts; however, in order to facilitate continued improvements in the areas of work control and communications, Brunswick management has initiated a Project Quality Team (PQT) to address site Command, Control and Communication. The PQT will include consideration of the following items:

1. Define and proceduralize Operator (et. al.) performance standards.

2. Define and proceduralize a standard communications framework, which will include (but is not limited to) the following:

   A. Standard terminology and phraseology.

   B. Standard communications process.

   C. Development of a Communication Manual that will apply sitewide.

3. Incorporate command, control, an communications standards into the functional area of "Training", and develop objectives against which participants can be assessed and evaluated.

4. Enforce standards sitewide; this becomes a management standard against which managers and supervisors will be formally evaluated.

The products of this PQT will be completed by March 31, 1991.

Implementation of the products of the Project Quality Team on Command, Control, and Communication will further enhance site performance in the areas of work control and communication. Improved site performance relative to communication and work control further ensures that events similar to the TIP event are precluded.