CP&L

Carolina Power & Light Company

JUN 24 1982

Office of Nuclear Reactor Regulation
ATTN: Mr. D. P. Vassallo, Chief
Operating Reactors Branch No. 2
United States Nuclear Regulatory Commission
Washington, D.C. 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324
LICENSE NOS. DPR-71 AND DPR-62
SUPPLEMENTAL INFORMATION FOR GENERIC LETTER 82-05
POST-TMI REQUIREMENTS

Dear Mr. Vassallo:

Your letter of March 17, 1982 requested Carolina Power & Light Company (CP&L) provide information concerning the post-TMI requirements contained in Enclosure 1 of your letter. The requested information was submitted by our letter dated April 23, 1982.

The attached enclosures contain supplemental information concerning selected post-TMI items which have been the subject of recent discusions with members of the NRC Staff.

If you have any questions on these items, please contact our staff.

Yours very truly,

E. E. Utley
Executive Vice President
Power Supply and
Engineering & Construction

A046

WRM/mf (081C1T1)
Enclosure

cc: Mr. J. P. O'Reilly (NRC-RII)
Mr. J. Van Vliet (NRC)

E. E. Utley, having been first duly sworn, did depose and say that the information contained herein is true and correct to his own personal knowledge or based upon information and belief.

Franklin Murray
Notary (Seal)

FRANKLIN MURRAY NOTARY PUBLIC WAKE COUNTY, N.C.

My commission expires: OCT 04 1986

ENCLOSURE 1

ITEM	REQUIREMENT	STATUS	REFERENCES	CP&L SCHEDULE UNIT 1	CP&L SCHEDULE UNIT 2	COMMENT
II.B.2 Plant Shielding	Modify facility to provide access to vital areas under accident conditions.	Complete	CP&L Ltrs. 12/31/79 04/23/82	-	-	See Attachment 1
II.B.3 Post-Accident Sampling	Install upgrade post-accident sampling capability	Incomplete	CP&L Ltr. 04/23/82	06/01/83	06/01/83	See Attachment 2
II.F.1.2 Accident Monitoring (Effluent Monitoring)	Provide capability for effluent monitoring of iodine	Incomplete	CP&L Ltr. 04/23/82	06/01/83	06/01/83	See Attachment 3
II.F.1.6 Accident Monitoring (Hydrogen Monitoring)	Provide continuous indication of hydrogen concentration in containment	Incomplete	CP&L Ltr. 04/23/82	Reload 3	Reload 5	See Attachment 4

(081C1T1-E)

ATTACHMENT 1

Item II.B.2 - Plant Shielding

Our response dated April 23, 1982 to Generic Letter 82-05 apparently created some confusion over the status of our work on NUREG-0737 Item II.B.2. The confusion was caused by our comments relating to a review of the range adequacy of area radiation monitors. The concern over adequacy of the range of area radiation monitors is not an issue for Item II.B.2, but rather under Regulatory Guide 1.97. Carolina Power & Light Company does not consider resolution of this concern to be required for completion of Item II.B.2.

As stated in our April 23, 1982 response, the environmental qualification review is being performed within the framework of I.E. Bulletin 79-01B.

In conclusion, CP&L has no outstanding work on Item II.B.2 and considers this item complete.

ATTACHMENT 2

Item II.B.3 - Post-Accident Sampling

The major procurement problem identified in our April 23, 1982 response to Generic Letter 82-05 was the procurement of a penetration assembly for Brunswick Unit 2. The Unit 2 penetration assembly was fabricated by B. F. Shaw Company and delivered on May 7, 1982. Installation of the penetration will be completed prior to the end of the Unit 2 1982 refueling outage. The penetration assembly for Unit 1 was delivered from B. F. Shaw during the first week of June 1982, and will be installed during the Unit 1 1982 refueling outage.

While major equipment availability is not a problem, numerous revisions to Bills of Materials have been incurred due to evaluation of material availability either on-site or from vendors. This effort has been focused on obtaining materials that can be acquired rapidly to accomplish the project; however, this approach requires both drawing and plant modification changes commensurate with material changes.

Other numerous Unit 2 installation impacts, however, have occurred, primarily to outage tie-ins, due to constantly changing plant conditions brought on by fuel loading and systems availability from other work. All tie-ins and outage related work for Unit 2 will be completed prior to startup for Cycle 5. The gaseous sample inputs from the drywell come from the new hydrogen/oxygen sample system (Item II.F.1.6). Since the potential exists to have the new hydrogen/oxygen sample system in after the post-accident sampling system, provisions are being made through piping/tubing changes to utilize the existing hydrogen/oxygen system to provide gaseous sample paths in the event the new hydrogen/oxygen system installation occurs after the post-accident sampling system installation.

Finally, although CP&L will continue to work this item for Unit 2 following the Unit 2 refueling outage, it should be noted that the same resources will be required to install the Unit 1 post-accident sampling system during the Unit 1 refueling outage beginning in September 1982. These resource constraints, coupled with knowledge of system startup problems experienced by other utilities, reinforce the adequacy and reasonableness of CP&L's schedule.

In conclusion, the June 1, 1983 completion schedule set forth in Enclosure 1 continues to represent a realistic schedule for Item II.B.3. This schedule allows CP&L to overcome potential unknown material, installation, and manpower problems that may occur while pursuing completion of this item.

ATTACHMENT 3

Item II.F.1.2 - Effluent Monitoring (Stack Monitoring)

The stack monitoring project associated with Item II.F.1.2 requires the construction of a plant stack building to house the sample/monitoring system, a new buried electrical duct bank, major cable installation, and the installation of a new isokinetic probe for the plant stack. As discussed in our April 23, 1982 response to Generic Letter 82-05, we are experiencing procurement problems with several items associated with the plant stack monitoring modification.

The plant stack building is presently being procured, and it appears that the building will be installed no earlier than October 1, 1982. If this schedule continues to hold, all construction interconnections testing must be compressed into a one-month period in order to be ready to install the stack isokinetic probe by the start of the Unit 2 snubber inspection outage window (November 20, 1982). To expedite the stack monitoring project, CP&L has elected to erect the building with site construction forces rather than acquire an outside contractor.

Purchase Orders have been issued to procure the bulk of the power, control, and instrumentation cabling required for the project. In addition, several Change Orders have been issued to clarify cable specifications, request additional lengths of cable which were not initially determined to be required, and to expedite procurement by specifically requesting cabling from a particular vendor who had stated that the needed cabling was in stock. During subsequent correspondence with the vendor, it was determined that no cable was actually in stock at the time of the request. At present, all cabling is expected to be delivered in July 1982.

Carolina Power & Light Company has been working with General Atomic Company since August 1981 to develop an acceptable isokinetic sample probe design for the stack monitoring project. Upon finalization of the design specifications in March 1982, procurement activities were begun. The sample probe delivery date is presently scheduled for November 12, 1982. Installation of the new stack isokinetic sample probe involves the replacement of the existing stack sample probe and requires a dual unit outage to complete since the stack is common to both units. Unit 2 is scheduled for a snubber inspection outage commencing no less than four months and no greater than six months following startup for Cycle 5. The snubber inspection outage will occur concurrent with the Unit 1 1982 refueling outage. Based on the current Unit 2 refueling outage startup date of July 20, 1982, the snubber inspection outage window should occur between November 20, 1982 and January 20, 1983. All efforts are being made to expedite delivery of the stack isokinetic sample probe prior to the Unit 2 snubber inspection outage so that this scheduled dual unit outage can be utilized rather than a forced outage of either or both units. Any slippage in the delivery schedule for the stack isokinetic sample probe could impact our snubber inspection outage installation window. To support the startup of either or both units following the installation of the new stack isokinetic probe, the balance of stack effluent monitoring system must be installed and operational. This will facilitate the rapid installation of the stack isokinetic sample probe and allow the unit(s) to startup.

Based on the above information, if installation should not be completed by the snubber outage date, then the final installation of stack isokinetic sample probe will be completed during the first available dual unit outage after the Unit 1 1982 refueling outage, but prior to June 1, 1983.

ATTACHMENT 4

Item II.F.1.6 - Containment Hydrogen Monitoring

The drywell of each Brunswick unit is provided with a nitrogen inerted atmosphere to preclude the possibility of a hydrogen combustion event occurring following a LOCA. Combustion gas control is based on the control of oxygen, which is produced in more limited quantities than hydrogen following a LOCA. Maintenance of an inerted atmosphere is required by plant Technical Specifications and assures that hydrogen buildup following a LOCA does not result in an uncontrolled recombination of hydrogen and oxygen.

Our existing capabilities coupled with our current level of maintenance meets the requirements of the TMI Action Item and are adequate in the interim until final upgrade is achieved. Since (1) combustible gas control at Brunswick is based on oxygen control and (2) the overall range of the oxygen monitors will not be increased (although the span of the low range oxygen monitor will be increased to provide additional flexibility), we believe that the existing system meets the intent of this TMI Action Item. At present, each of Brunswick units have two containment gas analyzer channels, each with a hydrogen monitor and an oxygen monitor. The existing system is required operable when the unit is in Conditions 1 or 2. The existing hydrogen monitors have a dual range of 0-10% and 0-20%, and the existing oxygen monitors have a dual range of 0-5% and 0-25%. The new hydrogen monitors will have a dual range of 0-10% and 0-30%, and the new oxygen monitors will have a dual range of 0-10% and 0-25%. The existing equipment has had numerous operating problems such that it is a high maintenance item and requires above average attention. It has been CP&L's intention to upgrade this equipment regardless of the TMI Action Item for both economic and reliability reasons, and we have committed to do this upgrade in conjunction with the TMI requirements, even though this project is essentially independent of the Action Item.

Procurement activities are in progress with no known major equipment delivery problems at this time. As is being done for Item II.B.3, efforts have been directed towards obtaining materials that can be acquired rapidly to accomplish the project. This has resulted in numerous revisions to Bills of Materials due to the evaluation of material availability either on-site or from vendors, thereby requiring drawing and plant modification changes commensurate with these material changes.

In our April 23, 1982 response to Generic Letter 82-05, we stated that we were evaluating our current designs and engineering in an attempt to expedite the installation of portions of the system requiring a unit outage for installation. The results of the engineering evaluation for Unit 2 are that the outage related work associated with this modification cannot be installed without precluding continued operation of the existing hydrogen/oxygen monitors.

The Reload 5 completion schedule for the Containment Hydrogen Monitoring System set forth in Enclosure 1 was based on following:

1. The schedule for system installation was and still is longer than the present Unit 2 refueling outage (Reload 4).

2. The outage work consists primarily of tie-ins to the plant utilizing the existing tie-ins.

3. The time required for final tie-ins and checkout being estimated at two to four weeks (or six to eight weeks if both channels are done in series), which is much longer than the five to seven day duration of the Unit 2 snubber inspection outage.

4. Since Confirmatory Orders are to be issued for the schedule, then any schedule proposed by CP&L must be conservative and allow sufficient margin to resolve potential known or unknown problems that may arise.

Given the above bases, the first planned outage of sufficient length to have the Unit 2 containment hydrogen monitoring system operable would be Reload 5. In order to improve this schedule, the present work plan is structured as follows:

1. All installation work for final system tie-ins would be scheduled to be completed the first or second week in October 1982.

2. The checkout and acceptance testing of the system would be performed on both system channels with a targeted completion by the first week in November 1982.

3. If needed, one system channel would be placed in an LCO condition approximately one week prior to the Unit 2 snubber inspection outage, and final system tie-ins on that channel would be made. It is expected that operability of the new system channel could occur prior to the end of the snubber outage.

4. A decision would be made during the time frame of item 3 above as to whether the second channel should be attempted at that time, in parallel with the first channel of the system.

If work proceeds as discussed above, the Unit 2 containment hydrogen monitoring system could be operable by the end of the snubber inspection outage. If any problems arise, one channel of the new system would be operable with the second channel to be tied-in using LCOs. It is expected that the vulnerability to a forced outage using LCO conditions to tie-in the second channel would be somewhat reduced by the improved reliability of the first system channel.

Based on the procurement and installation problems and our present compensatory measures discussed above, the schedular dates given in Enclosure 1 are considered realistic and should be used as the basis for any Confirmatory Order.