



Carolina Power & Light Company

FILE: NG-3514(B)

March 9, 1981

SERIAL NO.: NO-81-419

Mr. Darrell G. Eisenhut
Director, Division of Licensing
Office of Nuclear Reactor Regulation
U. S. 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
MARK I CONTAINMENT PROGRAM

Dear Mr. Eisenhut:

SUMMARY

On January 13, 1981, the NRC issued orders for modification of the licenses for Brunswick Steam Electric Plant Unit Nos. 1 and 2 which require that Carolina Power & Light Company complete all plant modifications that are needed to assure that the facility conforms to the acceptance criteria in Appendix A of NUREG 0661, by February 28, 1982, for Brunswick Unit 1 and by November 30, 1981, for Brunswick Unit 2. The NRC order also requires that the units be shut down on those dates until such modifications are completed. For reasons discussed below, CP&L hereby requests that NRC issue modifications to the above orders to require CP&L to: (1) complete the major safety modifications (T-quencher and vent header deflector) on Unit 1 during the upcoming refueling outage, and (2) complete as much of the minor safety modification work as possible on each unit during the upcoming Unit 1 and Unit 2 refueling outages, and complete any remaining minor modifications during the subsequent refueling outage for each unit. The refueling outage schedules are discussed later in this letter.

PREVIOUS CP&L SCHEDULE INFORMATION

The dates in the NRC orders were based on a letter sent to the NRC staff on September 2, 1980, which indicated that we would complete these modifications during the refueling outages scheduled to conclude in February, 1982, for Brunswick Unit 2 and in May, 1982, for Brunswick Unit 1. Since that time, additional information has been made available to CP&L concerning the completion of the plant unique analyses which are necessary to identify and then design any modifications required in accordance with the Mark I program. In a January 8, 1981, telephone conversation with Mr. T. A. Ippolito, and in our letter of the same date, we explained the necessary revision in our contemplated schedule for completing these Mark I modifications. This information, however, was not incorporated into your January 13 orders. For the reasons discussed in the remainder of this letter, it is necessary that the compliance schedules be modified either administratively by your office, or through the hearing process as described in the January 28, 1981 Federal Register Notice.

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CAUSES OF DELAY IN SCHEDULE(1) Scope of Work

In our discussions with the staff, no mention was made by the staff of the amount of modifications involved. It is important to note that between the time period of August, 1980, and January, 1981, the NRC staff has changed its schedule considerations for the Mark I modifications to include not just the major safety modifications but also the minor modifications. In a telephone conversation on August 18, 1980, between Mr. Chris Grimes, of the NRC, and Mr. Larry Steinert, GE Owner's Group, Mr. Grimes indicated that the NRC staff was aware of the problems with schedules for completing minor modifications, and was considering separate schedules for major and minor modifications. Thus, while the NRC staff was looking for a compliance schedule for major safety modifications in August 1980, the orders reflect a compliance schedule for all modifications, known or unknown, major or minor. This change represents a significant increase in the scope and schedule of design, procurement, and construction over that contemplated in August, 1980. Because of the unique nature of each Mark I plant's torus contents, the amount of modifications may vary significantly from plant to plant. In the case of the Brunswick Units, approximately 25 structures must be analyzed by the PUA, and have the potential for requiring modifications. This requires an extensive amount of analysis and can result in extensive design and procurement work for the minor engineering modifications. It is also important to note that what is considered to be a minor engineering modification often is a major construction modification with substantial impact on outage. In order to complete the minor engineering modifications, about 8 weeks (in the torus) is required on each Brunswick unit. This work must be done in sequence with the major modifications for BSEP 1, resulting in an outage of about 17 weeks for major and minor safety modifications. In the case of BSEP 2, approximately 8 weeks (in the torus) is required to do the minor safety modifications. Mr. Grimes further stated that the staff wanted realistic schedules and that schedule changes due to future unforeseen problems are legitimate issues which could be resolved later. We consider the failure of the GE Test Facility, the inclusion in the order of modifications that are as yet unidentified, and changes in the Brunswick capacity factors to be very legitimate issues and therefore believe that they should have been factored into the orders. Since the staff has determined that continued operation of all Mark I units until the modifications are completed does not threaten public health and safety because of the reasons outlined above, we believe it is not only appropriate but necessary that the staff modify its January 13th orders to enable CP&L to complete the Mark I modifications in accordance with the schedule discussed below.

(2) GE Test Facility Delays

At the time of our September 2, 1980, letter, the GE Test Facility had undergone a failure. Subsequently, this facility was repaired and the necessary data was partially provided by GE to our architect-engineer in late 1980. Therefore, it was not until December, 1980 that our architect-engineer was able to provide us with a revised date for completion of the plant unique analysis (PUA). The PUA is necessary in order to provide accurate loading on the torus structures, which can then be used to design any necessary

modifications to those structures. The PUA was originally scheduled to be completed in June, 1981; however, because of the delay due to the repairs to the GE Test Facility and the subsequent delay in providing data to our architect-engineer, the PUA for all affected components, systems and structures now will not be completed until September, 1981, for Brunswick Units 1 and 2. An expeditious schedule to factor in the necessary design and procurement times, will result in material for the necessary modifications being available at the site in approximately July, 1982.

(3) Start Date vs End Date for Refueling Outages

The delay by GE, the attendant delay in completing the plant unique analyses, and the inclusion of as yet unidentified modifications are major contributing factors to our request for an extension of the completion date. However, there are several other major considerations which need to be factored into our request. In our letter of September 2, we provided the completion dates for the refueling outages during which the modifications would be made. Rather than using the completion dates for the outages, the orders utilized expected start dates for the outages. As you are aware, any licensee's projection for the start date of a refueling outage is based upon an average capacity factor for that unit. During the ensuing time frame, any significant revisions in the capacity factor can necessitate a change in the start of the refueling outage. Therefore, even had the slip by GE in providing data to our architect-engineer not resulted in any slip in the plant unique analysis, it would still be necessary for us to seek a modification of the orders, to provide us with the necessary flexibility in starting the refueling outage at the appropriate time of each unit's fuel cycle.

(4) Other Factors Which Must Be Considered

While we understand your desire to incorporate fixed completion dates into the orders for the Mark I modifications, the extensive construction work involved with these modifications necessitates that we schedule these modifications during a major refueling outage. As a result, our commitment for completion dates at the end of this letter provides a necessary flexibility which is not inherent in the orders. As presently constituted, your January 13, 1981, orders would require that Carolina Power & Light Company shut down Unit No. 2 on November 30, 1981, and maintain the unit at a shutdown condition while we awaited the completion of design and procurement for the various modifications. A similar situation will exist for Unit No. 1, although some material may be available and on site. The dates in the NRC orders are such that CP&L and its customers will likely suffer a fuel penalty for both Units. We are also quite concerned that the orders do not factor in major operational and occupational considerations such as maintaining occupational exposure as low as reasonably achievable (ALARA), that the orders would require the units to be shut down for a separate outage with an extra thermal cycle on both units, and that the orders would result in shutdown margin penalties, possibly on both units, thereby affecting the economy of not only the present fuel cycle, but the subsequent fuel cycle. Our concerns stem from the fact that this is not a substantial unresolved safety issue and that the staff has issued a safety evaluation report which does not tie completion of the modifications to any definitive time element associated with returning to the desired margin of safety. Since the Commission staff has made a

determination that all of the Mark I BWR units can continue to operate until such time as they project their completion of the Mark I modifications, we believe that a similar schedule should be accorded to CP&L for the Brunswick units.

CP&L SCHEDULE

Because of the delay due to the GE Test Facility failure (affecting downcomer/vent header joint), our A/E now plans to complete the PUA for Brunswick 1 and 2 by September 1981. This will enable design modifications to be completed by March 1, 1982. Procurement is then scheduled to be completed by about July 1, 1982. This schedule reflects the time necessary to conduct the PUA for the approximately 25 items which have been identified as potentially requiring modification within the torus. In addition, the major safety modifications (T-Quencher and vent header deflector) are also factored into this schedule. For Brunswick 1, CP&L will complete the major safety modifications during the next scheduled refueling outage. This outage is set to begin in Spring 1982, and conclude in late Summer or early Fall; however, this outage schedule could be delayed due to unplanned outages or other factors that affect capacity factor and system reliability. In view of the NRC staff's position that a firm calendar date be established for completion of work, November 30, 1982 should be established for completion of the major safety modifications for Unit 1. This date should allow for any delays in the refueling outage due to unanticipated reduction in capacity factor during the ensuing months. Since not all of the minor modifications will be complete in terms of design and procurement at the start of this outage, CP&L will do as much of the minor engineering modification work as possible during the refueling outage and complete any remaining minor engineering modification work during the following refueling outage, but no later than December 31, 1983.

For Brunswick Unit 2, the T-Quencher and vent header modifications were completed in 1980, and only the minor engineering modifications remain to be completed. Since the design and procurement for the minor modifications will not be completed by the upcoming refueling outage for Unit 2, CP&L proposes to complete as much of the minor engineering modification work as possible during the upcoming refueling outage (which is presently set to begin before Summer 1982, and last about 10-12 weeks), and to complete any remaining minor engineering modification work during the following refueling outage, but no later than December 31, 1983.

UNRESOLVED ISSUES THAT COULD FURTHER IMPACT SCHEDULE

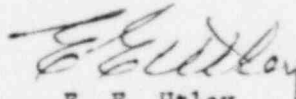
The preceding schedules incorporate two essential factors, whose disposition is in the hands of the NRC staff. While it is necessary to complete design work and procurement on a very expedited basis to have material on-site for the refueling outages, we cannot meet our proposed schedule if the NRC staff performs confirmatory reviews of the design modifications after receipt of the PUA. Past experience with NRC changing designs or design requirements on items such as fire protection and Technical Support Centers has demonstrated that we should await the outcome of NRC reviews before making major construction and/or procurement commitments. Therefore, if NRC intends to review these minor engineering design

modifications, our preceding schedules will no longer be valid. Instead, new schedules, allowing time for redesign, procurement and integration with our system planning requirements would have to be developed. Second, the NRC is meeting with the GE Mark I Owner's Group in early March to discuss GE downcomer data. Any significant delays in the NRC resolution/approval of that data could result in similar delays for downcomer modifications.

ALTERNATIVE ACTIONS AVAILABLE

In order to preserve its right to a hearing in the event that it is unable to obtain relief through other administrative means, CP&L filed on February 27, 1981, a petition with the NRC for a hearing on the issue of the compliance schedule in Section V of the January 13, 1981 orders. CP&L is hopeful, however, that this issue can be resolved through administrative means other than the hearing process. Under such circumstances, of course, the issue raised in the petition for hearing would become moot and CP&L would withdraw its petition. As discussed in our February 17, 1981 telephone conversation with your staff, we are available to answer any questions you have concerning this request, or to meet with your staff in a meeting at which a decision would be made by the NRC staff concerning modification of the schedule.

Yours very truly,



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

DLB/dk (N#39)

cc: Mr. H. R. Denton