



Carolina Power & Light Company

March 7, 1979

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Office of Nuclear Reactor Regulation
ATTENTION: Mr. T. A. Ippolito, Chief
Operating Reactors Branch No. 3
United States Nuclear Regulatory Commission
Washington, D. C. 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO. 1
DOCKET NO. 50-325
LICENSE NO. DPR-71

FIRE PROTECTION MODIFICATIONS - EXTENSION OF INSTALLATION DATE

Dear Mr. Ippolito:

Current evaluations of the status of the fire protection modifications discussed in the NRC's Fire Protection Safety Evaluation Report (SER) for the Brunswick Steam Electric Plant indicate that some of the modifications affecting Unit No. 1 will not be complete by the Unit No. 1 startup date of April 8, 1979. The purpose of this report is to identify the modifications which will not be completed, the reasons these modifications will not be complete, and the projected dates by which completion is expected. The estimated completion dates have been projected based on current information. Despite our intensive management commitment to installation of all fire protection systems at the earliest date possible, circumstances beyond our control, such as delayed delivery of materials and parts, could result in extension of these dates. Carolina Power & Light Company has been, and will continue to be, fully committed to installation of fire protection modifications on as timely a schedule as possible. However, because of the reasons discussed in the remainder of this letter, we are requesting that the NRC review the following information and issue a supplement to the SER reflecting the revised completion dates. (For informational purposes, a list of modifications that will be accomplished by Unit No. 1 startup is provided in Attachment I. Attachment II lists those systems that will not be completed.)

In general, there are four basic reasons which have contributed to delays in installation of some of the planned modifications. In June, 1977, the NRC requested that CP&L commit to an installation date for the planned fire protection modifications. At that time, the review of the plant's fire protection status was not complete, and the various modifications were still in the conceptual stage. At the time, we had insufficient information to accurately gauge the time required for engineering, procurement and construction, or the impact of various operational restrictions on construction progress. However, in keeping with our policy of full cooperation with the NRC in its fire protection review, our management agreed to install the modifications by the next refueling outages. We have continued our management's dedication to meeting the original schedule since our commitment in June, 1977.

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Subsequent to June, 1977, extensive modifications to our industrial security system have been made, involving a significant amount of operational restrictions. These major modifications to the security system have been in progress in addition to the fire protection work. Conflicts between these two major items of work have arisen, necessitating changes in system designs, and these changes have resulted in the need for re-engineering of some modifications and changes in bills-of-material. The end result has been delays due to extended procurement times and delays due to changing manpower requirements.

Another cause of delay to most of the modifications arises from the fact that much of the instrument and control cables associated with the various outlying buildings, such as the Service Water Building and the Diesel Generator Building, are routed to the Control Building through one of the Reactor Buildings. Thus, the requirement to maintain secondary containment integrity during plant operation and during fuel handling evolutions has created a bottleneck in the construction process by delaying cable pulling operations.

The fourth major problem encountered has been the need to make modifications to the fire main loop in the form of adding new sectionalizing valves, providing new taps for additional or new water supplies to various buildings, and increasing the size of the currently installed taps. This work has had to be done in a carefully planned manner to ensure that the water supply to the various safety related structure fire suppression systems is not interrupted. This has necessitated the installation of temporary water supplies with their related procurement and installation problems and delays. Additionally, maintenance of water supplies dictates that only one portion of the loop can be worked at a time. Thus, the operability date of most of the various fire suppression systems is to some degree affected by the progress of this modification.

The following information discusses specific reasons for delay for each system listed in Attachment II:

A. Reactor Building 1

1. Sprinkler System

Unavailability of some material has been encountered due to long lead time and/or the need to procure specific items as a result of design changes required to resolve interferences in the field. Major design rework has been required by interferences found in the field, such as with existing field run piping and conduit. Further, operational restrictions imposed by the technical specifications delayed accomplishment of planned work during plant operation; e.g., the requirement for maintaining secondary containment integrity during operating and refueling evolutions and the need to provide backup fire suppression systems while existing systems are being modified. In addition, the modification must be worked after other modifications to prevent interferences with the schedule for having the standpipe system operable.

2. Standpipe System

Operational restrictions imposed by the technical specifications delayed accomplishment of planned work during plant operation; e.g., the requirement for maintaining secondary containment integrity during operating and refueling evolutions and the need to provide backup fire suppression

systems while existing systems are being modified. In addition, the modification must be worked after other modifications to prevent interferences. Also, working the modification would make the existing suppression system inoperable. Thus, the design and installation of a *temporary* backup system to assure adequate fire suppression capability was necessary.

B. Diesel Generator Building

1. Sprinkler System

The need to install a backup fire suppression system to be operable while the existing systems were being modified has delayed the completion of this work. A backup system is both a technical specification requirement as well as a prudent fire protection measure. In addition, this modification must be worked after a portion of the ventilation system modification in order to assure a safe working atmosphere in the fuel oil storage tank rooms.

2. Standpipe System

This system cannot be completed until after the sprinkler systems in the Diesel Building, including all supply piping from the yard loop, are fully operable since this system, supplied from a temporary source, is serving as a backup fire suppression system for the sprinklers.

3. Foam Systems

These systems have been delayed due to the long lead time involved with some of the components. The diesel air filter foam system could not be worked until two of the diesel generator exhaust silencers were removed from the fan room, making room for installation of the foam equipment. Portions of the fuel oil storage tank room foam systems could not be worked until a suitable ventilation system was installed in the tank rooms to provide a safe working environment.

C. Service Water Building

1. Sprinkler System

The delay in completing this system results from the sequencing of the modifications to the fire main loop.

2. Standpipe System

The delay in completing this system results from the sequencing of the modifications to the fire main loop.

D. Control Building

1. Fire Barriers

Unavailability of some material has been encountered due to long lead times and the need to procure specific items as a result of design changes required to resolve interferences in the field. An operational restriction has resulted from the need to shut down the process computers while upgrading the Computer Room walls to a three-hour rating.

2. Ventilation System

This modification has not been worked since, in accordance with the technical specifications, both units must be shut down to perform the work. This work is scheduled for the overlap period when both units are shut down.

E. Radwaste Building

1. Sprinkler System

Major design rework has been required by interferences found in the field including structural interferences and conflicts with routine radwaste operating activities. In addition, some delay in completion of this system will result from the necessary sequencing of the fire main loop modifications.

Justification for Continued Plant Operation

In the preceding sections, the systems that will not be completed by the startup of Unit 1 have been enumerated. With the exception of certain fire barriers and ventilation modifications in the Control Building, the deficient modifications consist of sprinkler and standpipe system additions in the other areas of the plant. Although these modifications will not be complete prior to startup, it should be noted that fire detection system modifications will be complete for the entire unit, which will provide prompt notification in the unlikely event of a fire occurring in a critical area. This will allow prompt response by the fire brigade to the area in question. It should be noted that although a number of suppression system additions or modifications will not be complete, many of them will be functional utilizing temporary water supplies. In addition, many required fire barrier and cable coating modifications will have been completed, reducing the amount of combustibles exposed to a fire. Most importantly, though, the modifications required to provide remote and normal shutdown during a Cable Spreading Room or Control Room fire will have been completed, adding a significant measure of safety to plant safe shutdown in the event of a critical fire.

As indicated in our expected operability dates shown in Attachment II for the incomplete modifications, Carolina Power & Light Company is actively engaged in completing the fire protection modifications in as short a time frame as possible in light of the difficulties discussed above. We believe that these delays in completing the remaining modifications will not present a hazard to the health and safety of the public, as the completion dates are within the time frame for completion of fire protection modifications, established by the Nuclear Regulatory Commission as October, 1980.

Although this letter provides substantial information relevant to delaying the modifications listed in Attachment II, we recognize that the NRC staff may require additional information to complete its review. In order to help minimize review time and to be as responsive as possible to NRC staff questions, we have requested a meeting with your staff on March 9, 1979, to discuss

any outstanding questions you may have concerning fire protection. At that time, we hope to resolve all remaining NRC questions, if any, on this subject, so that the requested installation date extensions can be issued prior to April 8, 1979.

Yours very truly,



E. E. Utley
Senior Vice President
Power Supply

DLB/mf

List of Complete Modifications

The modifications which will be completed by the Unit No 1 startup date are listed below. The list is divided into sections by building with modifications not related to a specific building fire protection subsystem listed separately.

Reactor Building 1

1. Fire Barriers
2. Fire Detection

Diesel Generator Building

1. Fire Barriers
2. Fire Detection
3. Ventilation System
4. Exhaust Silencer Removal

Service Water Building

1. Fire Barriers and Curbs
2. Fire Detection
3. Oil Separator Installation

Control Building

1. Fire Detection

AOG Building

1. Standpipe System
2. Fire Detection

Makeup Water Treatment Building

1. Standpipe and Sprinkler System
2. Fire Barriers
3. Fire Pump Suction Piping
4. Fire Pump Fuel Line Rupture Protection

Other

1. Unit No. 1 Remote Shutdown System
2. Diesel Generator Independent Control System
3. Fire Protection Controls, Alarm, and Annunciators Installation

List of Incomplete Modifications

The modifications which will not be completed by the current Unit No. 1 startup date April 8, 1979, are listed below. The list is divided into areas by building to present a clear picture of modification work in each safety-related structure required for Unit No. 1 operation.

Reactor Building 1

1. Sprinkler System

Expected operability date: July 27, 1979*

2. Standpipe System

Expected operability date: April 23, 1979

Diesel Generator Building

1. Sprinkler System

Expected operability date: July 27, 1979*

2. Standpipe System

Expected operability date: May 11, 1979

3. Foam Systems

Expected operability date: July 27, 1979*

Service Water Building

1. Sprinkler System

Expected operability date: July 27, 1978*

2. Standpipe System

Expected operability date: April 11, 1979

*NOTE: These dates are preliminary estimates. They will be refined when more detailed data is available, but most likely not before April 23, 1979.

List of Incomplete Modifications (Cont'd)

Control Building

1. Fire Barriers

Expected operability date: July 27, 1979*

2. Ventilation System

Expected operability date: July 27, 1979*

Radwaste Building

1. Sprinkler System

Expected operability date: July 27, 1979*