



Carolina Power & Light Company

APR 30 1982



Office of Nuclear Reactor Regulation
ATTN: Mr. D. B. 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
REFUELING OPERATIONS - REQUEST FOR
REVISION TO TECHNICAL SPECIFICATIONS

Dear Mr. Vassallo:

SUMMARY

In accordance with the Code of Federal Regulations, Title 10, Part 50.90 and Part 2.101, Carolina Power & Light Company (CP&L) hereby requests revisions to the Technical Specifications (TS) for the Brunswick Steam Electric Plant (BSEP) Unit Nos. 1 and 2.

The proposed TS change would allow core loading and unloading without the use of fuel loading chambers (FLCs); approval of these TS changes would allow fuel movement operations to be expedited considerably. Fuel unloading for the current Unit 2 refueling outage is scheduled for May 2 - 9, 1982, and the attached TS changes would be useful beginning on May 4. Therefore, we request your expeditious review and approval of this submittal.

DISCUSSION

Fuel movement operations (both core unloading and loading) are critical path activities during the upcoming Unit 2 refueling outage. Approval of the requested TS revisions should enable CP&L to cut a minimum of 2 - 3 days from the outage critical path activities. That is, if FLCs were used during the upcoming fuel movement operations, and no problems with FLCs occurred, we would anticipate a time savings of 2 - 3 days. However, in the past, time-consuming problems have occurred with FLCs. Therefore, if this TS change is approved, the potential critical path time savings could prove even more substantial than 2 - 3 days.

CP&L's TS revision request is not industry unique as NRC has approved core loading and unloading without the use of FLCs for Georgia Power Company's Hatch Plant and Niagara Mohawk Power Corporation's Nine Mile Point. Our TS revision request is also more conservative than the aforementioned plants because during spiral loading and unloading, the control rods will be left in place. Enclosed please find a more detailed justification pertinent to our TS revision request.

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\$4400.00

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Mr. Vassallo

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SCHEDULE

As discussed in the "Summary" section, CP&L requests that NRC approve the TS changes by May 4, 1982 in order to fully maximize the benefit of reducing Unit 2 critical path outage time. However, issuance of the TS changes any time before May 9 or 10, would be useful for the remaining Unit 2 core discharge activities. The next time period when the TS changes would be needed occurs when the Unit 2 core reload begins, currently scheduled for May 28, 1982.

ADMINISTRATIVE INFORMATION

You will find enclosed the proposed BSEP Unit 1 and BSEP Unit 2 Technical Specifications with the changes indicated by vertical lines in the right-hand margins. We have evaluated this request in accordance with the criteria in 10CFR 170.22 and have determined that this request involves a single technical issue; therefore, a Class III and a Class I license amendment fee is required for Unit 1 and Unit 2, respectively. Our check for \$4,400.00 is enclosed in payment of these fees.

If you should have any questions regarding this matter, please contact us.

Yours very truly,

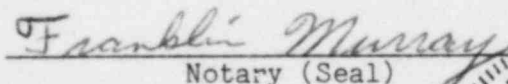


E. E. Utley
Executive Vice President
Power Supply and
Engineering & Construction

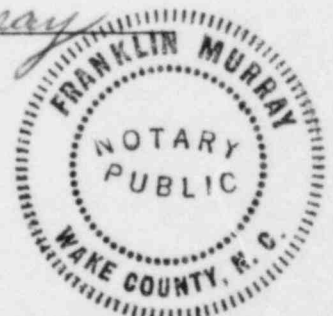
EEU/MSG/lr (n-36)
Enclosures

cc: Mr. J. P. O'Reilly (R-II)
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.


Notary (Seal)

My commission expires: 10/4/86



JUSTIFICATION FOR TECHNICAL SPECIFICATION CHANGE

The purpose of Source Range Monitors (SRMs) during core alterations is to monitor flux levels so that in the unlikely event of an approach to criticality, these abnormally high flux levels could be detected in time to halt operations.

During major core alterations such as full core unloads and reloads, the count rate of the SRM can be expected to drop below the required 3 counts per second (CPS) when fuel is removed from around the SRM detectors. A common means of maintaining the two required SRM channels in this situation is to use relocatable fuel loading chambers (FLCs) which are connected to the normal SRM circuits. These chambers are positioned as close as necessary to the fuel in the core so that the detectors will read at least 3 cps. The proposed technical specification change will allow certain core loading and unloading schemes to take place without the use of FLCs.

During a full core spiral unload, the SRMs should be permitted to drop below 3 cps. Since a spiral unload will involve removal of positive reactivity only, the core configuration existing prior to the spiral unload will be the most reactive of any configuration during the unload. Therefore, the decrease of SRM count rate below 3 cps should not require the use of any special neutron monitoring equipment (e.g. FLCs) during the spiral unload. Note that the requirements for control rod removal during core alterations are not affected by this proposed technical specification change, with the exception of the SRM operability requirement.

The SRMs are of greater importance during the core spiral reload than they are during the unload. As fuel is being added to form the new core, it is necessary to ensure that the SRMs are operating properly. To ensure SRM operation, bundles will be placed in control cells (with control blades) that are adjacent to the SRMs. Placing fuel adjacent to these SRMs will raise the SRM count rate to the required 3 cps or greater. After the required number of SRMs are pronounced operable, the core spiral loading may begin.

Since the SRMs are located several control cells from the core center, there will be a significant water gap between the center core control cells and the SRMs. This will have the effect of reducing the sensitivity of the SRM to the fuel loading taking place in the center of the core. This reduced sensitivity is acceptable considering the small number of control cells to be loaded until the SRM is surrounded by fuel, and the very small likelihood of the core achieving criticality with such a small amount of loaded fuel. The use of SRMs instead of FLCs should prove to be a better method in terms of reliability, since the FLCs have to be continually relocated in the core during refueling operations.