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FEB 03 1995

SERIAL: BSEP 95-0014

U. S. Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

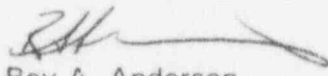
BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 & 50-324/LICENSE NOS. DPR-71 & DPR-62
FEEDWATER SPARGER INSPECTIONS

Gentlemen:

The purpose of this letter is to request Nuclear Regulatory Commission (NRC) concurrence with Carolina Power & Light Company's (CP&L's) plans for future inspections of the feedwater spargers for the Brunswick Steam Electric Plant, Unit Nos. 1 and 2. As described in Enclosure 1, CP&L plans to perform a visual examination of the feedwater spargers in lieu of the liquid penetrant (LP) testing required by the NRC's letter dated June 6, 1991 (Reference 1). Your concurrence with our proposed plan for using underwater high resolution camera, in lieu of LP examinations, for future inspections of the feedwater spargers on both Unit 1 and Unit 2, is requested by March 1, 1995.

Please refer questions regarding this submittal to Mr. R. P. Lopriore at (910) 457-2212.

Sincerely,



Roy A. Anderson

WRM/wrm

cc: Mr. S. D. Ebner, Regional Administrator, Region II
Mr. D. C. Trimble, Jr., NRC/NRR Project Manager (Acting) - Brunswick
Mr. C. A. Patterson, NRC Senior Resident Inspector - Brunswick
The Honorable H. Wells, Chairman - North Carolina Utilities Commission

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ENCLOSURE 1

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2 DOCKET NOS. 50-325 & 50-324 LICENSE NOS. DPR-71 & DPR-62 FEEDWATER SPARGER INSPECTIONS

DISCUSSION:

During previous refueling outages, cracking has been identified emanating from the side drilled flow holes in both the Unit 1 and the Unit 2 feedwater spargers. This cracking has propagated into the heat affected zones of the circumferential welds joining the sparger arms to the tees. In a letter dated June 6, 1991, the NRC stated that CP&L should continue to perform liquid penetrant examinations on the feedwater spargers at future outages (Reference 1).

An evaluation of the circumferentially oriented flaws and the potential for generation of loose parts has been previously performed by General Electric Nuclear Energy (GENE) and submitted by CP&L (References 2 and 3). This evaluation applies to both units and remains valid for the current fuel cycles.

Carolina Power & Light Company has performed LP examinations of both the Unit 1 and Unit 2 feedwater spargers during previous outages. Additionally, a UT examination of the Unit 2 feedwater sparger confirmed that the circumferential cracking was through-wall and approximately the same length on the inside diameter as on the outside diameter. The cracking has been well documented by these inspections. The number of flow hole cracks has increased but the longest crack is still approximately one-half inch in length. The crack growth rate at the circumferential welds has been negligible.

The performance of liquid penetrant testing requires that the reactor vessel be deflooded. Due to the high dose rates in the deflooded reactor pressure vessel (approximately 1 millirem per second with the shielded work platform in position), CP&L proposes instead to inspect the feedwater spargers with an underwater, high resolution, remote-operated camera. These visual inspections will be performed in accordance with the minimum requirements for VT-1 examinations specified in the 1980 Edition/Winter 1981 Addenda of the American Society of Mechanical Engineers (ASME) Code, Section XI, IWA-2211. The remote camera examination is expected to save approximately 8 person-rem during each unit's refueling outage.

Carolina Power & Light Company has previously requested and received NRC approval of an outage-specific request to perform visual examinations of the feedwater spargers in lieu of liquid penetrant examinations of the feedwater spargers (References 3 and 4). The Company believes that a visual technique meeting the guidance provided by NUREG-0619 is adequate to detect and measure cracks that are significant for this component.

Nuclear Regulatory Commission concurrence with the proposed plan for using underwater high resolution camera, in lieu of LP examinations, for future inspections of the feedwater

spargers on both Unit 1 and Unit 2, is requested by March 1, 1995.

REFERENCES:

1. Letter from Ngoc B. Lee (USNRC) to Lynn W. Eury (CP&L), "Review of the Carolina Power & Light Company's Report On Performance of Nondestructive Examination of Feedwater Nozzles and Safe Ends During The 1989/1990 Maintenance/Refueling Outage at Brunswick Steam Electric Plant, Unit 2 (TAC No. 77745)," June 6, 1991.
2. General Electric Company Report No. GE-NE-523-112-1191; DRF 137-0010, November 1991, "Feedwater Sparger Circumferential Cracking Evaluation for Brunswick Units 1 and 2."
3. Letter from D. C. McCarthy (CP&L) to the NRC Document Control Desk, "NUREG-0619 Feedwater Nozzle and Sparger Examination Results" June 8, 1992 (Serial: NLS-92-194).
4. Letter from Patrick J. Milano (USNRC) to R. A. Anderson (CP&L), "Remote Camera Examination of Feedwater Sparger, Brunswick Steam Electric Plant, Unit 2 (TAC No. M85922)," June 24, 1993.