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USNRC **CP&L**  
ATLANTA, GEORGIA  
Carolina Power & Light Company  
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Brunswick Steam Electric Plant  
P. O. Box 10429  
Southport, NC 28461-0429

November 20, 1981

FILE: B09-13522  
SERIAL: BSEP/81-2223

Mr. James P. O'Reilly, Director  
U. S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, Suite 3100  
Atlanta, GA 30303



Dear Mr. O'Reilly:

This report is submitted in accordance with Section 2.5.2.f of the Environmental Technical Specifications for the Brunswick Steam Electric Plant. It fulfills the requirement for a written report within ten (10) days when the release rate for a period of greater than forty-eight (48) hours exceeds the reporting level specified in Section 2.5.2.f of the Brunswick plant Environmental Technical Specifications.

The average release rate for the forty-eight (48) hours at the stack beginning November 9, 1981, at 0501 and ending November 11, 1981, at 0501 was .02817 curies/second. The gamma ( $\gamma$ ) factor was 1.15 and the beta ( $\beta$ ) factor was .0214 for the time period. The flow rate of the off-gas from the main condenser vacuum system was 161.95 cfm, and the activity measured at the off-gas steam jet air ejector monitor was 36,100  $\mu$ ci/cc (see the attached sheet).

The source of the noble gas activity is from fuel cladding deficiencies during normal plant operation. The major component of this activity is Xenon-138.

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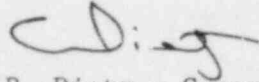
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Fuel sipping operations are planned for the next Unit No. 2 refueling outage. Defective fuel elements will be replaced which should reduce the release of noble gaseous activity during normal plant operations.

Yours very truly,



C. R. Dietz - General Manager  
Brunswick Steam Electric Plant

JK/tt

Attachment

cc: Mr. R. A. Hartfield  
Mr. V. Stello, Jr.

Release Rate of Off-Gas from the Main Condenser Vacuum System

	<u>μCi/sec</u>
Xe-138	25011.3
Kr-87	2540.9
Kr-88	3326.1
Kr-85m	891.3
Xe-135	3778.5
Xe-133	1552.5