



Carolina Power & Light Company

Brunswick Steam Electric Plant  
P. O. Box 10429  
Southport, NC 28461

USNRC REGION II  
ATLANTA, GE 30314

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April 1, 1981

FILE: B09-13514  
SERIAL: BSEP/81-0694

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

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 & 2  
LICENSE NOS. DPR-71 AND DPR-62  
DOCKET NOS. 50-325 AND 50-324  
SUPPLEMENTAL RESPONSE TO AN INFRACTION OF NRC REQUIREMENTS

Dear Mr. O'Reilly:

The Brunswick Steam Electric Plant (BSEP) is submitting the attached report as the final response to an infraction cited in IE Inspection Report 50-324/80-38 and 50-325/80-41.

Infraction:

As required by Environmental Technical Specification 3.5.2c, Appendix B, sampling and analysis of radioactive material in gaseous waste, particulate form and radioiodine shall be performed in accordance with Table 3.5-2 which specifies that particulate radioactivity shall be sampled and analyzed weekly at all environmental release points.

Contrary to the above, on July 21, 1980, and July 28, 1980, sampling and analysis of airborne particulate radioactivity was inadequate in that up to forty percent of the total particulate activity in samples from Reactor Building roof vents (environmental release points) was not identified.

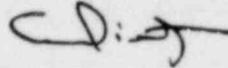
Mr. James P. O'Reilly

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April 1, 1981

The initial response to this infraction is contained in BSEP letter 80-2123 dated December 30, 1980. The letter identified the causes of the problem and the corrective actions taken to ensure the problem does not reoccur. The attached report gives the results of a review of all previous data in weekly gaseous analysis forms and fulfills the commitment made in BSEP letter 80-2123.

Very truly yours,



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

NDS/mew

Enclosures

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

EVALUATION OF THE AMOUNT OF PARTICULATE ACTIVITY WHICH BYPASSED  
THE PARTICULATE FILTERS IN THE ROOF VENT MONITORS DURING THE PERIOD  
JANUARY 1, 1976 TO DECEMBER 31, 1980

The following steps were taken in evaluating the amount of particulate activity which had bypassed the particulate filters and was collected on the Cesco charcoal filters of the Reactor and Turbine Building roof vent monitors.

Steps:

- (1) Every charcoal filter computer printout was examined for activities due to isotopes normally associated with particulate matter, e.g., Cr-51, Mn-54, Cs-137 etc. Printouts for the period January 1, 1976 to December 31, 1980 were checked.
- (2) The particulate activities with  $T_{1/2} \geq 8$  days were decay corrected from the midpoint of the count time to the time at the end sample collection.
- (3) The activity of each isotope was converted to curies using the counting efficiency values for charcoal filters.
- (4) The activity for each isotope was summed over a quarter.
- (5) The quarterly summed activities for each isotope were totaled to give a quarterly particulate activity.
- (6) The quarterly percentage of technical specification limits reported in the Semiannual Environmental Report were recalculated using the sum of the particulate activity on the particulate filters and that determined to be on the charcoal filters. The equations used in recalculating the percentage of technical specification limits were the equations used in preparation of the original Semiannual Environmental Reports.

Summary and Conclusion

Table 1 gives a summary of the recalculated percentage of the technical specification limits and the originally reported percentages.

An examination of the adjusted quarterly values of gaseous effluents does not reveal any additional violations of environmental technical specification for gaseous effluent release limits as given in Section 2.5.2.C(2) and 2.5.2.b(2).

TABLE 1

## SUMMARY OF ADJUSTMENTS TO SEMIANNUAL REPORTS

Date			Percentage of Quarterly Technical Specification Limits	
Year	-	Quarter	Reported Value	Adjusted Value
76	-	1st	1.92	3.29
76	-	2nd	1.67	5.82
76	-	3rd	0.28	3.54
76	-	4th	0.11	1.47
77	-	1st	2.01	3.82
77	-	2nd	30.6	35.2
77	-	3rd	40.0	46.0
77	-	4th	16.5	20.8
78	-	1st	13.9	17.1
78	-	2nd	12.3	13.98
78	-	3rd	26.7	31.4
78	-	4th	*19.7	14.4
79	-	1st	14.6	17.0
79	-	2nd	8.9	13.6
79	-	3rd	12.8	15.4
79	-	4th	55.5	61.9
80	-	1st	*95.1 (661)**	94.0 (659.9)**
80	-	2nd	30.1	42.6
80	-	3rd	*6.68	6.03
80	-	4th	25.4	26.0

\*Adjusted values include correction for computational errors.

\*\*Values reported in the ammended six months report submitted in January 1981 which include calculated releases from the auxiliary boiler.