



USNRC REGION II
ATLANTA, GEORGIA

Carolina Power & Light Company

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Brunswick Steam Electric Plant
P. O. Box 10429
Southport, NC 28461-0429

May 17, 1982

FILE: B09-13510E
SERIAL: BSEP/82-1068

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

Dear Mr. O'Reilly:

As requested in IE Inspection Report 50-324/82-09 and 50-325/82-09, the Brunswick Steam Electric Plant submits the following information on the NRC mobile laboratory and the Stack Monitoring System.

The Region II NRC mobile laboratory permanent on-site facilities are currently being engineered by the plant staff. Current plans are to locate the NRC mobile laboratory approximately 30 feet west of the fire station. Temporary power terminals will be installed at the fire station and the required jumpers made available for use. Due to current outage requirements on the plant Engineering staff, the modification and installation of the permanent terminals will not be completed until December 31, 1982. However, should an emergency arise where the NRC mobile laboratory is required to be on site, temporary power can be made available at that site within two hours.

During this inspection, the inspector noted that the measured sample flow rate was not corrected for differences in pressure at the particulate-charcoal sampling assembly and at the stack discharge. Failure to correct for this pressure difference could result in overestimating the sample flow rate and thus underestimating particulate and radioiodine releases. To resolve this concern, BSEP installed additional calibrated pressure gauges and rotameters in the stack filter house sample line to verify readings of existing instrumentation. This instrumentation was installed on the downstream side of the particulate-charcoal housing. It was determined that the combined error for the in-line pressure gauge and rotameter was thirty-eight percent. While performing these tests, it was also determined that the existing rotameter, a Brooks Instrument Model No. 1114-0802B1A, was installed with the float inverted and that readings were being taken at the wrong point on the float. The error generated by this event is incorporated in the thirty-eight percent error.

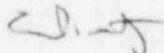
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The overestimation of flow rate could result in the underestimation of iodine and particulate stack releases. Starting with the second quarter of 1975 and ending in the first quarter of 1982, the releases were recalculated using the adjusted flow rate. There were no instances where this correction factor resulted in a release exceeding the technical specifications which had not already been reported. The results of these recalculations are enclosed in Table 1.

To correct the problems identified, several actions have been undertaken. The rotameter float has been installed correctly and a drawing has been posted at the rotameter showing the correct point to read the flow level. This information will also be incorporated in the plant procedure for sampling. The flow rate on the rotameter has been verified using an NBS traceable rotameter and a correction factor has been established. A periodic calibration procedure will be implemented to ensure the accuracy of the system. Stack Filter House Sampling System will also be modified and equipped with additional flow monitoring instrumentation to provide improved sampling capabilities. Projected completion dates for these projects have not yet been established.

An investigation into the improper placement of charcoal cartridges in particulate-charcoal sampling assemblies has determined that the problem only existed at the stack sampling station and that two people were involved. The results of this investigation also indicate that if all the plant effluent charcoal cartridges had been improperly installed in the stack sampling assembly during this period, BSEP would not have exceeded the limits of Technical Specification Appendix B, Section 2.5.2(2) during the second, third and fourth quarters of 1981 and the first quarter of 1982. These are the only quarters in which these technicians have been on site. These results are provided in Table 2. To prevent this event in the future, E&RC procedure 2000 has been revised to indicate proper installation of these charcoal cartridges.

Very truly yours,



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

RMP/gvc

Enclosure

cc: Mr. R. C. DeYoung

TABLE 1
PERCENTAGE OF QUARTERLY EFFLUENT TECHNICAL SPECIFICATIONS

QUARTER	FOR INDICATED FLOW			FOR CORRECTED FLOW (W/38% FLOW ERROR)			% GTR. ETS
	IODINE	PARTS	I-131+PART	IODINE	PARTS	I-131+PART	
2nd 1975	0	0.16	N/A	0	0	N/A	
3rd 1975	1.22E-3	0.49	N/A	1.69E-3	0.49	N/A	
4th 1975	0.13	2.62	N/A	0.18	2.73	N/A	
1st 1976	1.31	3.21	N/A	1.81	3.23	N/A	
2nd 1976	0.02	3.26	N/A	0.03	3.26	N/A	
3rd 1976	18.98	3.48	N/A	25.36	3.48	N/A	
4th 1976	3.88	1.31	N/A	5.25	1.33	N/A	
1st 1977	2.62	2.01	N/A	3.55	2.21	N/A	
2nd 1977	9.85	30.6	N/A	13.2	34.7	N/A	
3rd 1977	6.88	40.0	N/A	8.92	40.0	N/A	
4th 1977	0.13	16.5	N/A	0.16	16.5	N/A	
1st 1978	2.09	13.9	N/A	2.88	14.92	N/A	
2nd 1978	1.93	12.3	N/A	2.65	13.3	N/A	
3rd 1978	2.33	26.7	N/A	3.09	27.5	N/A	
4th 1978	1.02	12.08	N/A	1.38	12.12	N/A	
1st 1979	0.805	14.6	15.4	0.858	14.96	15.82	+ 0.42
2nd 1979	0.583	11.4	11.98	0.692	11.53	12.22	+ 0.24
3rd 1979	11.3	12.8	24.1	13.83	13.29	27.12	+ 3.02
4th 1979	7.39	55.5	62.89	8.82	55.75	64.57	+ 1.68
1st 1980	21.8	95.1	116.9	23.87	95.22	119.09	+ 2.19
2nd 1980	0.543	30.1	30.64	0.558	34.38	34.938	+ 4.30
3rd 1980	0.104	3.60	3.704	0.117	3.62	3.737	+ .033
4th 1980	10.4	19.69	30.09	11.03	20.49	31.52	+ 1.41
1st 1981	4.22	16.17	20.39	4.36	16.17	20.53	+ 0.14
2nd 1981	1.186	1.80	2.986	1.452	1.99	3.443	+ 0.457
3rd 1981	6.016	3.34	9.354	7.075	3.675	10.75	+ 1.396
4th 1981	8.823	25.7	34.52	10.634	25.63	36.26	+ 1.74
1st 1982	12.86	68.3	81.2	14.6	71.4	86.0	+ 4.8

The values under indicated flow were obtained using data from the semiannual environmental reports. These numbers may differ from some of the reported values due to slight differences in calculation techniques. The corrected values were obtained using the same calculation techniques after application of the flow correction factor.

Operating technical specification limits for iodines and particulates

January 1975 - December 1976

Iodines = 2 curies per quarter

Particulates = $[4.7E5]Q_s + [7.2E7]Q_r \leq 1$

January 1977 - December 1978

Iodines = 4 curies per quarter

Particulates = $[4.7E5]Q_s + [7.2E7]Q_r \leq 1$

January 1979 - Present

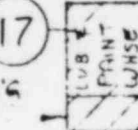
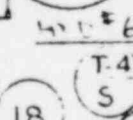
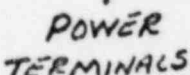
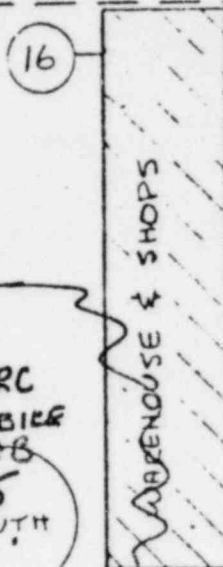
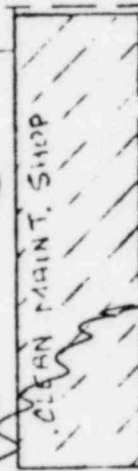
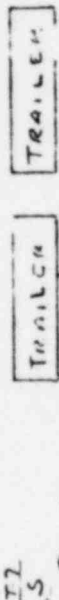
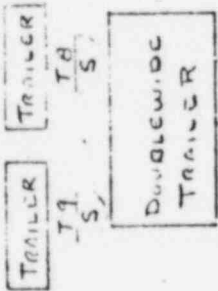
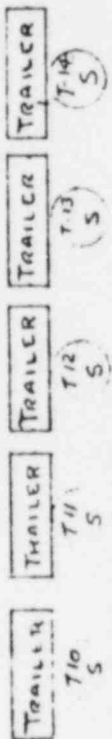
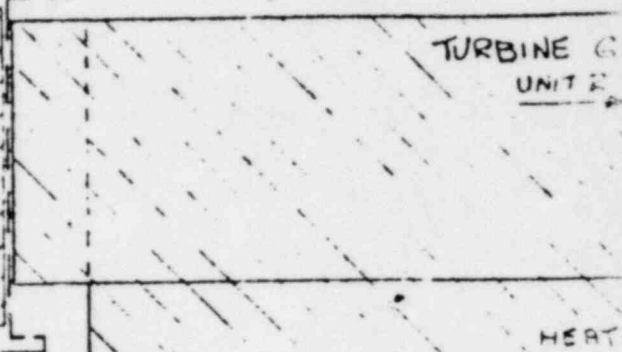
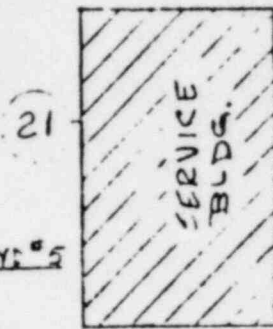
Iodines and particulates = $[3.26E6]Q_s + [3.74E7]Q_r \leq 1$

TABLE 2

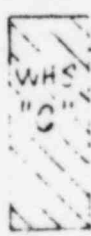
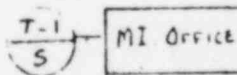
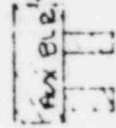
<u>QUARTER</u>	<u>REPORTED</u>	<u>CORRECTED</u>
2nd 1981	3.0589%	4.245%
3rd 1981	9.35%	34.52%
4th 1981	15.37%	43.06%
1st 1982	49.48%	62.01%



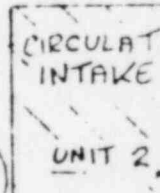
LUBE OIL STORAGE



HYD #7



SAWDUST HOUSE



HYD #17

CONDENSERS

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