CP&L

Carolina Power & Light Company

Brunswick Nuclear Project
P. O. Box 10429
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BRUNSWICK STEAM ELECTRIC PLANT UNITS 1 AND 2
DOCKET NOS. 50-325 AND 50-324
LICENSE NOS. DPR-71 AND DPR-62
SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

Gentlemen:

Enclosed is the Semiannual Radioactive Effluent Release Report for Brunswick Steam Electric Plant, covering the period from January 1, 1992, through June 30, 1992.

This report is submitted for the Brunswick Steam Electric Plant in accordance with Technical Specification 6.9.1.8.

Very truly yours,

J. W. Spencer, General Manager
Brunswick Nuclear Project

SHH

Enclosure

cc: Mr. S. D. Ebneter
Mr. R. H. Lo
BSEP NRC Resident Office

280011

IE48
1/1

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Brunswick Steam Electric Plant

Semiannual Radioactive Effluent Report

January 1, to June 30, 1992

ATTACHMENT 1

Supplemental Information

January 1, to June 30, 1992

EFFLUENT WASTE DISPOSAL SEMIANNUAL REPORT
Supplemental Information

Facility: Brunswick Steam Electric Plant
Licensee: Carolina Power and Light Company

1. Regulatory Limits
   A. Fission and activation gases (Technical Spec. 3.11.2.2)
      *(1) Calendar Quarter
           (a) 10 mrad gamma
           (b) 20 mrad beta

      (2) Calendar Year

           (a) 20 mrad gamma
           (b) 40 mrad beta

   B. Iodine-131, iodine-133, tritium, and particulates with half-lives greater than eight days (Technical Spec. 3.11.2.3)
      *(1) Calendar Quarter
           (a) 15 mrem to any organ

      (2) Calendar Year

           (a) 30 mrem to any organ

      (3) Calendar Quarter for Burning Contaminated Oil

           (a) 436 uCi

      (4) Calendar Year for Burning Contaminated Oil

           (a) 872 uCi

   C. Liquid effluents (Technical Specification 3.11.1.2)
      **(1) Calendar Quarter

           (a) 3 mrem to total body
           (b) 10 mrem to any organ

      (2) Calendar Year

           (a) 6 mrem to total body
           (b) 20 mrem to any organ

      NOTE: Dose calculations are determined in accordance with the Off-Site Dose Calculation Manual (ODCM)

*Used for percent of technical specification limit determinations in Table 1A.
**Used for percent of technical specification limit determinations in Table 2A.

2. Maximum permissible concentrations and dose rates which determine maximum instantaneous release rates.

A. Fission and activation gases (Technical Specification 3.11.2.1.a)

(1) 500 mrem/year to total body
(2) 3000 mrem/year to the skin

B. Iodine-131, iodine-133, tritium, and particulates with half-lives greater than eight days (Technical Specification 3.11.2.1.b)

(1) 1500 mrem/year to any organ

C. Liquid effluents (Technical Specification 3.11.1.1)
The concentration of radioactive material released in liquid effluents to unrestricted areas after dilution in the discharge canal shall be limited to the concentrations specified in 10CFR20, Appendix B, Table II, column 2, for radionuclides other than noble gases.

**(1) Tritium: MPC = 3 E-03 uCi/ml and
**(2) Dissolved and entrained gases: MPC = 2 E-04 uCi/ml

3. Measurements and Approximations of Total Radioactivity

A. Fission and activation gases

Analysis for specific radionuclides in representative grab samples by gamma spectroscopy.

B. Iodines

Analysis for specific radionuclides collected on charcoal cartridges by gamma spectroscopy.

C. Particulates

Analysis for specific radionuclides collected on filter papers by gamma spectroscopy.

D. Particulates for Burning Oil

Analysis for specific radionuclides by grab samples of each batch of oil to be burned.

E. Liquids Effluents

Analysis for specific radionuclides of individual releases by gamma spectroscopy.

** Used as applicable limits for Table 2A

Nuclear counting statistics are reported utilizing 1-sigma error. Total error where reported represents a best effort to approximate the total of all individual and sampling errors.

4. Batch Releases

A. Liquid

(1) Number of batch releases:	1.38E+02
(2) Total time period for batch releases:	1.44E+04 Minutes
(3) Maximum time period for a batch release:	1.91E+02 Minutes
(4) Average time period for a batch release:	1.04E+02 Minutes
(5) Minimum time period for a batch release:	1.40E+01 Minutes
(6) Average stream flow during periods of release of effluent into a flowing stream :	7.06E+05 GPM

B. Gaseous

(1) Number of batch releases:	0.00E 00 Minutes
(2) Total time period for a batch release:	0.00E 00 Minutes
(3) Maximum time period for a batch release:	0.00E 00 Minutes
(4) Average time period for a batch release:	0.00E 00 Minutes
(5) Minimum time period for a batch release:	0.00E 00 Minutes

5. Abnormal releases *

A. Liquid

(1) Number of releases:	0.00E+00
(2) Total activity released:	0.00E+00 Curies

B. Gaseous

(1) Number of releases:	0.00E+00
(2) Total activity released:	0.00E+00 Curies

* There were no abnormal releases that exceeded 10CFR20 or 10CFR50 limits.

See Page 6 for a discussion of release events that occurred.

Discussion of Tritium in the Storm Drain Collection Pond

Approximately 2.57E+07 gallons containing 7.19E+00 curies of tritium was released from the Storm Drain Collection Pond (SDCP) to the Intake Canal during this reporting period. The SDCP is a permitted release point. A detailed discussion of tritium in the SDCP was included in the previous Semiannual Radioactive Effluent Release Report.

NOTE 1: Curie totals are included in the quarterly summaries in Table 2A and Table 2B.

NOTE 2: The quantity of rainwater released from the Storm Drain Collection Basin and/or the Storm Drain Collection Pond are not included in VOLUME OF WASTE on Table 2A.

Discussion of Turbine Building Leakage

During this reporting period (March 22, 1992) it was discovered that the Turbine Building was experiencing a positive pressure which caused air from the building to escape from openings in the building at a rate of approximately 7,000 cfm. Radionuclides that were detected from an auxiliary sampler are reported in Tables 1A and 1C. Following is a comparison of radioactivity released via this pathway compared to the total radioactivity released from the vents. A corrective action plan has been developed and is discussed in ACR-92-270.

COMPARISON OF UNIT 2 TURBINE BUILDING LEAKAGE

ISOTOPE	CURIES
XE-135	8.82E-01
I-131	7.47E-05
I-132	2.46E-04
I-133	2.75E-04
I-135	2.16E-04
BA-140	4.93E-06
LA-140	8.68E-06
SR-89	1.30E-06
SR-90	4.29E-08
ALPHA	5.98E-07
TRITIUM	1.50E-01

MODE OF RELEASE	TOTAL CURIES FROM LEAKAGE	TOTAL GROUND RELEASE	% OF GROUND RELEASE
GASES	8.82E-01	3.41E+01	2.60E+00%
IODINES	8.12E-04	4.39E-02	1.80E+00%
PARTICULATE	1.50E-05	1.02E-03	1.50E+00%
ALPHA	5.98E-07	1.14E-05	5.20E+00%
TRITIUM	1.50E-01	2.76E+00	5.40E+00%
TOTAL	1.03E+00	3.69E+01	2.80E+00%

VOLUME RELEASED = 3.05E+13cc
DURATION OF RELEASE = 107 days

ATTACHMENT 2

Effluent and Waste Disposal Data

Brunswick Steam Electric Plant

January 1, to June 30, 1992

Enclosure 1

Table 1A: Gaseous Effluents - Summation of all Releases

Table 1B: Gaseous Effluents - Elevated Releases

Table 1C: Gaseous Effluents - Ground Level Releases

Table 2A: Liquid Effluents - Summation of all Releases

Table 2B: Liquid Effluents

Lower Limits of Detection

Table 3: Solid Waste and Irradiated Fuel Shipments

Enclosure 2

Combustion of Waste Oil

TABLE 1A
Effluent and Waste Disposal Semiannual Report for Year 1992
Gaseous Effluents - Summation of all Releases[NOTE 1]

	Unit	Qtr 1	Qtr 2	Est. Tot. Error %
A. FISSION AND ACTIVATION GASES				
1. Total release	Ci	3.57E+02	9.38E+01	1.15E 02
2. Average release rate for period	uCi/sec	4.55E+01	1.19E+01	
3. Percent of technical specification limit	%	5.60E-02	1.50E-02	
B. IODINES				
1. Total I-131	Ci	4.07E-03	7.41E-04	7.00E 01
2. Average release rate for period	uCi/sec	5.18E-04	9.42E-05	
C. PARTICULATES				
1. Total release	Ci	1.29E-03	5.26E-04	7.00E 01
2. Average release rate for period	uCi/sec	1.64E-04	6.69E-05	
3. Gross alpha	Ci	5.87E-06	7.10E-06	
D. Tritium				
1. Total release	Ci	5.58E+00	4.04E+00	7.00E 01
2. Average release rate for period	uCi/sec	7.10E-01	5.14E-01	
E. IODINE-131, IODINE-133, TRITIUM AND PARTICULATES				
1. Total Release	Ci	5.60E+00	4.04E+00	
2. Average release rate for period	uCi/sec	7.13E-01	5.14E-01	
3. Percent of technical specification limit	%	1.54E-01	3.20E-02	
F. PARTICULATES VIA BURNING CONTAMINATED OIL				
1. Total Release	Ci	6.48E-07	3.09E-06	
2. Average release rate for period	uCi/sec	8.24E-08	3.93E-07	
3. Percent of technical specification limit	%	1.49E-01	7.09E-01	

NOTE 1: Includes radionuclides released via abnormal and/or non-routine releases.

TABLE 1B
Effluent and Waste Disposal Semiannual Report for Year 1992
Gaseous Effluents - Elevated Releases
Continuous Release

Nuclides Released	Unit	Qtr 1	Qtr 2
1. FISSION GASES			
argon-41	Ci	4.06E+01	<LLD
krypton-85m	Ci	4.48E+01	1.32E+01
krypton-87	Ci	4.31E+00	<LLD
krypton-88	Ci	4.23E+01	9.99E+00
xenon-133	Ci	1.69E+02	5.84E+01
xenon-135m	Ci	8.23E+00	1.87E+00
xenon-135	Ci	1.74E+01	2.47E+00
xenon-137	Ci	3.14E+00	<LLD
xenon-138	Ci	1.44E+00	<LLD
total for period	Ci	3.31E+02	8.59E+01
2. IODINES			
iodine-131	Ci	2.38E-03	3.15E-04
iodine-132	Ci	3.82E-04	<LLD
iodine-133	Ci	5.37E-03	5.16E-04
iodine-135	Ci	3.41E-04	<LLD
total for period	Ci	8.47E-03	8.31E-04
3. PARTICULATES			
chromium-51	Ci	<LLD	1.20E-05
manganese-54	Ci	2.56E-06	<LLD
cobalt-60	Ci	1.14E-05	1.82E-05
strontium-89	Ci	1.45E-04	1.70E-05
strontium-90	Ci	<LLD	4.57E-07
cesium-137	Ci	7.59E-06	<LLD
barium-140	Ci	2.03E-04	2.85E-05
lanthanum-140	Ci	3.03E-04	4.11E-05
total for period	Ci	6.73E-04	1.17E-04
4. TRITIUM			
hydrogen-3	Ci	4.15E+00	2.70E+00

TABLE 1C
Effluent and Waste Disposal Semiannual Report for Year 1992
Gaseous Effluents - Ground Level Releases
Continuous Release

Nuclides Released	Unit	Qtr 1	Qtr 2
1. FISSION GASES			
xenon-133	Ci	9 65E+00	<LLD
xenon-135m	Ci	4.94E+00	<LLD
xenon-135	Ci	1.16E+01	7.90E+00
total for period	Ci	2.62E+01	7.90E+00
2.IODINES			
iodine-131	Ci	1.69E-03	4.26E-04
iodine-132	Ci	1.12E-02	4.71E-03
iodine-133	Ci	7.68E-03	3.33E-03
iodine-135	Ci	1.02E-02	4.67E-03
total for period	Ci	3.08E-02	1.31E-02
3. PARTICULATES			
chromium-51	Ci	2.25E-04	1.29E-04
manganese-54	Ci	1.04E-04	5.04E-05
cobalt-57	Ci	4.19E-08	<LLD
cobalt-58	Ci	1.81E-05	7.28E-06
cobalt-60	Ci	2.44E-04	2.07E-04
strontium-89	Ci	4.31E-06	4.59E-06
strontium-90	Ci	<LLD	1.25E-07
cesium-134	Ci	1.04E-05	<LLD
cesium-137	Ci	3.10E-06	1.54E-07
lanthanum-140	Ci	4.35E-06	4.33E-06
barium-140	Ci	1.52E-06	3.41E-06
cerium-141	Ci	<LLD	4.52E-07
total for period	Ci	6.15E-04	4.08E-04
4. TRITIUM			
hydrogen-3	Ci	1.43E+00	1.33E+00

TABLE 1D
Effluent and Waste Disposal Semiannual Report for Year 1992
Gaseous Effluents - Ground Level Releases
For Burning Contaminated Oil

Nuclides Released	Unit	Qtr 1	Qtr 2
1. PARTICULATES			
cobalt-60	Ci	6.48E-07	2.92E-06
cesium-137	Ci	<LLD	1.70E-07
total for period	Ci	6.48E-07	3.09E-06

TABLE 2A
Effluent and Waste Disposal Semiannual Report for Year 1992
Liquid Effluents - Summation of all Releases

	Unit	Qtr 1	Qtr 2	Est Tot % Error
A. FISSION AND ACTIVATION PRODUCTS [NOTE 1]				
1.Total release (excluding tritium, gases, & alpha)	Ci	1.97E-02	5.94E-03	3.50E 01
2. Avg. diluted conc. [NOTE 2]	uCi/ml	1.01E-09	3.37E-10	
3. Percent limit	%	3.10E-02	1.20E-02	
B. TRITIUM [NOTE 1]				
1. Total release	Ci	1.37E+01	1.38E+01	4.00E 01
2. Avg. diluted conc. [NOTE 2]	uCi/ml	7.04E-07	7.86E-07	
3. Percent limit	%	2.35E-02	2.62E-02	
C. DISSOLVED AND ENTRAINED GASES [NOTE 1]				
1. Total release	Ci	2.66E-02	6.79E-03	3.50E 01
2. Avg. diluted conc. [NOTE 2]	uCi/ml	1.37E-09	3.86E-10	
3. Percent limit	%	6.85E-04	1.93E-04	
D. GROSS ALPHA RADIOACTIVITY				
1. Total release	Ci	0.00E-00	0.00E-00	4.00E 01
E. VOLUME OF WASTE [NOTE 2]	liters	3.77E+06	5.27E+06	1.25E 01
F. TOTAL OF DILUTION WATER (used during release for average dil. conc.)	liters	1.94E+10	1.76E+10	1.30E 01
G. VOLUME OF COOLING WATER DISCHARGED FROM PLANT	liters	4.08E+11	3.04E+11	

NOTE 1: Includes radionuclides released via abnormal and/or non-routine releases.

NOTE 2: Does not include rainwater released (i.e. Storm Drain Collection Basin and/or Storm Drain Collection Pond).

TABLE 2B
Effluent and Waste Disposal Semiannual Report for Year 1992
Liquid Effluents - Batch Mode

Nuclides Released	Unit	Qtr 1	Qtr 2
1. FISSION AND ACTIVATION PRODUCTS			
sodium-24	Ci	8.62E-06	1.12E-05
chromium-51	Ci	1.40E-03	3.63E-04
manganese-54	Ci	3.37E-03	6.96E-04
iron-55	Ci	1.73E-03	1.58E-03
cobalt-58	Ci	8.33E-04	5.01E-05
iron-59	Ci	1.12E-05	<LLD
cobalt-60	Ci	1.20E-02	3.17E-03
zinc-69m	Ci	1.75E-06	<LLD
arsenic-76	Ci	2.96E-06	<LLD
strontium-90	Ci	5.92E-06	<LLD
strontium-92	Ci	5.74E-06	7.95E-07
niobium-95	Ci	2.06E-05	<LLD
niobium-95m	Ci	1.02E-05	<LLD
technetium-99m	Ci	<LLD	3.79E-06
silver-110m	Ci	7.17E-05	<LLD
cesium-134	Ci	1.86E-05	<LLD
cesium-137	Ci	1.85E-04	6.39E-05
barium-140	Ci	5.09E-06	<LLD
total for period	Ci	1.97E-02	5.94E-03

TABLE 2B (continued)
Effluent and Waste Disposal Semiannual Report for Year 1992
Liquid Effluents - Batch Mode

Nuclides Released	Unit	Qtr 1	Qtr 2
2. GASES			
xenon-133	Ci	4.06E-03	6.69E-03
xenon-133m	Ci	<LLD	1.03E-04
xenon-135m	Ci	2.51E-05	<LLD
xenon-135	Ci	2.25E-02	<LLD
total for period	Ci	2.66E-02	6.79E-03

Lower Limits of Detection

January 1, to June 30, 1992

µCi/ml

1. Liquid Releases

Fe-59	5.15E-08
Zn-69m	1.52E-08
As-76	3.97E-08
Nb-95	2.16E-08
Nb-95m	5.30E-08
Ba-140	5.49E-08
Tc-99m	1.51E-08
Ag-110m	6.42E-08
Cs-134	3.43E-08
Xe-133m	1.34E-07
Xe-135m	1.01E-07
Xe-135	1.70E-08
Sr-90	4.77E-09

2. Gaseous Releases

Ar-41	1.67E-08
Xe-133	2.94E-08
Xe-137	$t_{½}$ too short
Xe-138	3.78E-07
Xe-135m	1.69E-07
Kr-87	1.96E-08

3. Iodines and Particulates

Cr-51	3.72E-13
Mn-54	2.93E-14
Cs-137	6.38E-14
Co-57	2.36E-14
Cs-134	8.54E-14
Ce-141	4.23E-14
I-132	6.60E-13
I-135	6.40E-13
Sr-90	3.27E-15

NOTES

1: The above values represent typical "a priori" LLDs for isotopes where values of "<LLD" are indicated in Tables 1A, 1B, 1C, 2A, and 2B.

2: Where activity for any nuclide is reported as " Less than LLD", that nuclide is considered not present and the LLD activity listed is not considered in summary data.

Table 3A
Effluent and Waste Disposal Semiannual Report for Year 1992
Solid Waste and Irradiated Fuel Shipments

Waste Class A		January through June	
1. Total volume shipped (cubic meters)		1.55 E2	
Total Curie quantity (estimated)		1.46 E3	
2. Type of Waste	Units	Six-month Period	Est. Total % Error
a. Spent resins, filter sludges	meters^3	9.92 E1	
	Curies	1.35 E3	1.00E1
b. Dry active waste, compacted noncompacted	meters^3	5.56 E1	
	Curies	1.04 E2	1.00E1
c. Irradiated components	meters^3	0.00 E0	
	Curies	0.00 E0	N/A
d. Others (oil)	meters^3	0.00 E0	
	Curies	0.00 E0	N/A
3. Estimate of major radionuclide composition			
a.		Mn-54	6.10 E0%
		Fe-55	6.27 E1%
		Co-60	2.52 E1%
		Ni-63	2.80 E0%
		Cs-137	2.30 E0%
b.		Mn-54	6.21 E0%
		Fe-55	6.66 E1%
		Co-58	3.21 E0%
		Co-60	2.22 E1%
		Ni-63	1.70 E0%
c.		N/A	N/A
d.		N/A	N/A

Table 3A (cont.)

Effluent and Waste Disposal Semiannual Report for Year 1992
Solid Waste and Irradiated Fuel Shipments

4. Cross reference table, waste stream, form, and container type.

	Stream	Form	Container type	No. of shipments
a.	Resin	Dewatered & Solidified*	Type A/Type B	13/7
b.	Dry active waste	Compacted/non-compacted waste	STP	22
c.	Irradiated components		N/A	0
d.	Other		N/A	0
		*solidification agent or absorbent (e.g., cement, urea formaldehyde)		N/A

5. Shipment Disposition

a. Solid Waste

Number of Shipments	Mode of Transportation	Destination
42	Sole Use	CNSI/Barnwell SC

b. Irradiated Components

Number of Shipments	Mode of Transportation	Destination
0	N/A	N/A

TABLE 3B

Effluent and Waste Disposal Semiannual Report for Year 1992
Solid Waste and Irradiated Fuel Shipments

Waste Class B — January through June

1. Total volume shipped (cubic meters) 0.00 E0
   Total Curie quantity (estimated) 0.00 E0

2. Type of Waste

	Units	Six-month Period	Est. Total % Error
a. Spent resins, filter sludges	meters^3	0.00 E0	N/A
	Curies	0.00 E0	
b. Dry active waste, compacted, and noncompacted	meters^3	0.00 E0	N/A
	Curies	0.00 E0	
c. Irradiated components	meters^3	0.00 E0	N/A
	Curies	0.00 E0	
d. Others (describe)	meters^3	0.00 E0	N/A
	Curies	0.00 E0	

3. Estimate of major radionuclide composition

a.	N/A	N/A
b.	N/A	N/A
c.	N/A	N/A
d.	N/A	N/A

4. Cross reference table, waste stream, form and container type

Stream	Form	Container type	No. of shipments
a. Resin	Dewatered & Solidified	Type A/Type B	0 / 0
b. Dry active	Compacted/non-compacted waste	N/A	0
c. Irradiated components		N/A	0
d. Other		N/A	0

* Solidification agent or absorbent (e.g., cement, urea formaldehyde) N/A

Table 3B (cont.)
Effluent and Waste Disposal Semiannual Report for Year 1992
Solid Waste and Irradiated Fuel Shipments

5. Shipment Disposition

a. Solid Waste

Number of Shipments	Mode of Transportation	Destination
0	N/A	N/A

b. Irradiated Fuel

Number of Shipments	Mode of Transportation	Destination
0	N/A	N/A

TABLE 3C

Effluent and Waste Disposal Semiannual Report for Year 1992
Solid Waste and Irradiated Fuel Shipments

Waste Class C		January through June	
1. Total volume shipped (cubic meters)		1.63 E0	
Total Curie quantity (estimated)		2.02 E4	
2. Type of Waste	Units	Six-month Period	Est. Tot. % Error
a. Spent resins, filter sludges	meters^3	0.00 E0	N/A
	Curies	0.00 E0	
b. Dry active waste, compacted and noncompacted	meters^3	0.00 E0	N/A
	Curies	0.00 E0	
c. Irradiated components	meters^3	1.63 E0	1.0E1
	Curies	2.02 E4	
d. Others (describe)	meters^3	0.00 E0	N/A
	Curies	0.00 E0	
3. Estimate of major radionuclide composition			
a.		N/A	N/A
b.		N/A	N/A
c.	Fe-55	4.50 E1%	
	Co-60	5.04 E1%	
	Ni-63	4.20 E0%	
d.		N/A	N/A

4. Cross reference table, waste stream, form and container type

Stream	Form	Container Type	No. of shipments
a. Resin	Dewatered & Solidified *	N/A	0/0
b. Dry active waste	Compacted/non-compacted	N/A	0
c. Irradiated components	Non Compacted Waste Equipment Solid/Oxides	Type B	1
d. Others		N/A	0

* Solidification agent or absorbent (e.g., cement, urea formaldehyde) N/A

Table 3C (cont.)
Effluent and Waste Disposal Semiannual Report for Year 1992
Solid Waste and Irradiated Fuel Shipments

5. Shipment Disposition

a. Solid Waste

Number of Shipments	Mode of Transportation	Destination
1	SOLE USE	CNSI/Barnwell,SC

b. Irradiated Fuel (non-burial)

Number of Shipments	Mode of Transportation	Destination
0	N/A	N/A

ENCLOSURE 2

Combustion of Waste Oil

January 1, to June 30, 1992

During this reporting approximately 1,037 gallons of contaminated waste oil was incinerated in the on site incinerator. The total activity contained in this quantity of waste oil was 1.70E-07 Curies of Cs-137 and 3.57 E-06 Curies of Co-60.

ATTACHMENT 3

Environmental Monitoring Program

January 1, to June 30, 1992

Enclosure 1: Milk and Vegetable Sample Locations

Enclosure 2: Land Use Census

ENCLOSURE 1

Milk and Vegetation Sample Locations

January 1, to June 30, 19°2

No milk sample locations were available during this time period.

Vegetation sample locations remained unchanged.

ENCLOSURE 2

Land Use Census

January 1, to June 30, 1992

The 1992 Land Use Census will be performed and reported in the next reporting period.

ATTACHMENT 4

Effluent Instrumentation

January 1, to June 30, 1992

Enclosure 1: Radioactive Liquid Effluent Monitoring Instrumentation.

Enclosure 2: Radioactive Gaseous Effluent Monitoring

Enclosure 3: Liquid Hold-Up Tank

ENCLOSURE 1

January 1, to June 30, 1992

Radioactive Liquid Effluent Monitoring Instrumentation

No Radioactive Liquid Effluent Monitoring Instrumentation was inoperable for greater than 30 days.

ENCLOSURE 2

January 1, to June 30, 1992

Radioactive Gaseous Effluent Monitoring Instrumentation

Unit 1 & 2 Main Condenser Off-Gas treatment system explosive gas monitors 1(2)-OG-AIT-4284 (SJAE.A.H_2 Analyzer), 1(2)-OG-AIT-4285 (SJAE.A.H_2 Analyzer), 1(2)-OG-AIT-4324 (SJAE.B.H_2 Analyzer), and 1(2)-OG-AIT-4325 (SJAE.B.H_2 Analyzer) were inoperable for greater than a 30 day period during January 1 to June 30, 1992. Due to design problems, these monitors were not returned to service within 30 days. The Unit 2 Main Condenser Off-Gas treatment system explosive gas monitors were declared operable in March, 1992. The new assigned monitor designations following Plant Mod operability are: 2-OG-AIT-4284 - Stream 1 and 2; and 2-OG-AIT-4324 - Stream 1 and 2. The Unit #1 Modification has not been declared operable due to Unit #1 being shut down. Operability testing for this modification is required to be performed during unit operation.

The Unit 2 Reactor Roof Vent Flow Monitor 2-VA-FIQ-3356 was inoperable for a period of greater than 30 days during this reporting period. The flow monitor experienced intermittent erratic flow indications making the problem difficult to isolate. The problem was corrected and the monitor returned to service.

ENCLOSURE 3

Liquid Hold-Up Tank

January 1, to June 30, 1992

No liquid hold-up tank exceeded the 10 Ci limit during this reporting period.

ATTACHMENT 5

Major Modifications to the Radioactive Waste Treatment System

January 1, to June 30, 1992

As per footnote 7 to Technical Specification 6.15, a discussion of any major modifications to the radioactive waste treatment systems will be submitted with the Final Safety Analysis Report update.

ATTACHMENT 6

Meteorological Data

January 1, to June 30, 1992

As per Technical Specification 6.9.1.10.a footnote 6, the annual summary of meteorological data collected over the calendar year will be submitted to a file and will be available for NRC review upon request.

ATTACHMENT 7

Annual Dose Assessment

January 1, to June 30, 1992

As per Technical Specification 6.9.1.10.b, an assessment of radiation doses due to the radioactive liquid and gaseous effluents released during the calendar year will be reported within 90 days after January 1 of each year. The annual dose assessment is not included with this report.

ATTACHMENT 8

Off-Site Dose Calculation Manual (ODCM) and

Process Control Program (PCP) Revisions

January 1, to June 30, 1992

Brunswick Steam Electric Plant

There were no revisions made to the Process Control Program during this reporting period.

There were no revisions made to the Off-Site Dose Calculation Manual during this reporting period

ATTACHMENT 9

Reactor Building Release Evaluation

As reported in the previous Semiannual Report, the Unit #2 Reactor Roof Vent Monitor (2-CAC-AQH-1264-3) was inoperable for a period greater than 30 days during the July 1,1991 to December 31, 1991 reporting period due to design problems. As discussed in the previous report, a comparison of radioactivity released during the current reporting period has been made to the radioactivity released during past reporting periods and results are as follows. Two commonly identified isotopes (Co-60 and I-131) were used for the comparison. The μCi/cc data from January, 1991 to July, 1992 was plotted for each sample that identified the isotope. The plots indicated that there was very little, if any difference in the quantity of the radioisotopes that was identified both before and after the modification to the system. The data indicates that the air leaking into the sampler was not significantly different from the sample stream and therefore it is not necessary for previous Semiannual Effluent Release Reports to be revised. The evaluation is discussed in detail in ACR 91-612.