WISCONSIN ELECTRIC

POWER COMPANY

POINT BEACH NUCLEAR PLANT

UNIT NOS. 1 AND 2

SEMIANNUAL

MONITORING REPORT

JULY 1, 1987 through DECEMBER 31, 1987

U.S. Nuclear Regulatory Commission
Docket Nos. 50-266 and 50-301
Facility Operating License Nos.
DPR-24 and DPR-27

PREFACE

This Semiannual Monitoring Report is submitted in accordance with Point Beach Nuclear Plant Unit Nos. 1 and 2 Technical Specification 15.7.8.4 and filed under Docket Nos. 50-266 and 50-301 for Facility Operation License Nos. DPR-24 and DPR-27, respectively.

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1.0 RADIOACTIVE LIQUID RELEASES

The total radioactive liquid release excluding tritium for this reporting period was 2.05E-01 curies. This included 6.49E-02 curies in processed radioactive waste and primary coolant system letdown, 2.93E-02 curies in Unit 1 steam generator blowdown, 1.11E-01 curies in Unit 2 steam generator blowdown and <MDA curies in the retention pond.

The total tritium release for this reporting period was 4.05E+02 curies. This included 4.03E+02 curies in processed radioactive waste and primary coolant system letdown, 5.00E-02 curies in Unit 1 steam generator blowdown, 1.50E+00 curies in Unit 2 steam generator blowdown, and 3.61E-01 curies in the retention pond.

All radioactive liquid releases to Lake Michigan were made through the circulating water discharge system.

1.1 Circulating Water Radionuclide Release Summary

1.1.1 Releases During Current Reporting Period

Radioactive liquid releases via the circulating water discharge are summarized by individual source, total, and equivalent curie release on a monthly basis and presented in Table 1-1.

1.1.2 Additions to Previous Semiannual Monitoring Report

The following information was not available at the time of the previous report preparation and should be added to Table 1-1 of the Semiannual Monitoring Report for January 1, 1987, through June 30, 1987.

	January	February	March	April	May	June	6-Month Total
Total Activity Released (Ci)							
Gross Alpha	<MDA	<MDA	8.06E-07	3.15E-06	5.58E-07	4.16E-05	4.61E-05
Strontium	3.11E-05	9.75E-07	1.66E-06	7.61E-06	3.83E-03	2.48E-05	3.90E-03
Average Diluted Discharge Concentration (µCi/cc)							
Gross Alpha	<MDA	<MDA	1.50E-14	4.89E-14	8.71E-15	6.60E-13	
Strontium	8.33E-13	2.90E-14	3.09E-14	2.17E-15	5.98E-11	3.93E-13	

1.2 Isotopic Composition of Circulating Water Discharges

1.2.1 Releases During Current Reporting Period

The isotopic composition of circulating water discharges during the current reporting period is presented in Table 1-2.

1.2.2 Additions to Previous Semiannual Monitoring Report.

The following information was not available at the time of report preparation and should be added to Table 1-2 of the Semiannual Monitoring Report for January 1, 1987, through June 30, 1987.

	January	February	March	April	May	June	6 Month Total (Ci)
Sr-89	2.77E-05	<MDA	<MDA	4.66E-06	3.82E-03	<MDA	3.85E-03
Sr-90	3.40E-06	9.75E-07	1.66E-06	9.31E-06	9.90E-06	2.48E-05	5.00E-05

1.3 Subsoil Drain System Releases of Tritium

1.3.1 Releases During Current Reporting Period

The release of tritium via the subsoil drain system during the current reporting period is presented in Table 1-3.

TABLE 1-3

SUBSOIL SYSTEM DRAINS - TRITIUM SUMMARY
July 1, 1987, through December 31, 1987

	LOCATION				
Third Quarter	S-1	S-3	S-9	S-10	Totals
H-3 (μCi/cc)	<MDA	<MDA	No sample	<MDA	
Ave. Flow (gpd)	2.23E+03	1.43E+03	No flow	1.73E-04	
Fourth Quarter					
H-3 (μCi/cc)	<MDA	<MDA	<MDA	<MDA	
Ave. Flow (gpd)	2.33E+03	3.52E+03	1.07E+02	1.69E+04	
Semi-Annual Totals					
Total Released (Ci)	<MDA	<MDA	<MDA	<MDA	<MDA
Total Flow (gallons)	4.20E+05	4.55E+05	9.84E+03	3.15E+06	4.03E+06

TABLE 1-1

SUMMARY OF CIRCULATING WATER DISCHARGES
JULY 1, 1987 TO DECEMBER 31, 1987

	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL
Total Activity Released (Ci)							
Gamma Scan	3.42E-02	1.39E-01	2.61E-02	1.55E-03	3.79E-03	1.11E-03	2.05E-01
Gross Alpha	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Tritium	1.38E+02	7.66E+01	6.13E+00	8.10E+01	7.56E+01	2.86E+01	4.05E+02
Strontium	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total Volume Released(Gal)							
Processed Waste	1.01E+05	8.12E+04	3.57E+04	3.41E+05	2.05E+05	6.24E+04	8.36E+05
(U1) Steam Generator Blowdown	2.65E+06	2.50E+06	2.49E+06	2.55E+06	2.47E+06	2.49E+06	1.51E+07
(U2) Steam Generator Blowdown	2.58E+06	2.80E+06	2.47E+06	2.68E+06	1.44E+06	2.64E+06	1.46E+07
Retention Pond	3.47E+06	4.00E+06	2.74E+06	2.76E+06	4.35E+06	5.14E+06	2.24E+07
Total	8.80E+06	9.37E+06	7.73E+06	5.91E+06	8.46E+06	1.03E+07	5.05E+07
Volume of Dilution Water (Gal)	1.72E+10	1.65E+10	1.67E+10	1.76E+10	1.68E+10	1.20E+10	9.68E+10
Average Diluted Discharge Concentration (uCi/cc)							
Gross Gamma	5.25E-10	2.07E-09	4.13E-10	2.33E-11	5.95E-11	2.43E-11	
Gross Alpha	(1)	(1)	(1)	(1)	(1)	(1)	
Tritium	2.13E-06	1.22E-06	9.70E-08	1.22E-06	1.19E-06	6.33E-07	
Strontium	(1)	(1)	(1)	(1)	(1)	(1)	
Maximum Discharge Concentration During Release Period (uCi/cc)							
Gross Gamma	1.43E-10	1.99E-07	3.10E-10	1.33E-09	3.84E-10	2.09E-10	
Tritium	1.35E-04	1.05E-04	5.61E-06	8.17E-05	9.41E-05	1.36E-04	
Total Equivalent Curies Released							
Co-60 Equivalent Curies	1.69E-03	1.04E-01	3.97E-03	2.15E-03	3.45E-02	5.22E-03	1.51E-01
% Annual RETS Limit	1.78E-03	1.09E-01	4.19E-03	2.27E-03	3.64E-02	5.51E-03	1.60E-01
I-131 Equivalent Curies	4.94E-03	4.79E-03	4.16E-03	2.30E-04	4.71E-05	7.35E-05	1.42E-02
% Annual RETS Limit	1.88E-02	1.82E-02	1.58E-02	8.77E-04	1.79E-04	2.80E-04	5.43E-02
Tritium Equivalent Curies	1.38E+02	7.66E+01	6.13E+00	8.10E+01	7.56E+01	2.86E+01	4.05E+02
% Annual RETS Limit	7.04E-01	3.90E-01	3.12E-02	4.13E-01	3.85E-01	1.45E-01	2.07E+00

(1) Information unavailable at time of report preparation.
Note: Dissolved noble gases detected in liquid effluents are included in airborne release totals

TABLE 1-2

ISOTOPIC COMPOSITION OF CIRCULATING WATER DISCHARGES
JULY 1, 1987 TO DECEMBER 31, 1987

NUCLIDES RELEASED	JUL (Curies)	AUG (Curies)	SEPT (Curies)	OCT (Curies)	NOV (Curies)	DEC (Curies)	TOTAL (Curies)
Tritium	1.38E+02	7.66E+01	6.13E+00	8.10E+01	7.56E+01	2.86E+01	4.05E+02
F-18	2.29E-03	2.33E-03	8.30E-04	4.12E-05	<MDA	<MDA	5.49E-03
I-131	1.21E-03	1.62E-03	1.19E-03	4.43E-05	<MDA	<MDA	4.06E-03
I-132	4.83E-03	5.72E-03	3.95E-03	1.47E-04	<MDA	<MDA	1.46E-02
I-133	9.67E-03	1.05E-02	7.28E-03	8.04E-04	2.13E-04	3.33E-04	2.88E-02
I-134	3.33E-03	4.67E-03	2.89E-03	<MDA	<MDA	<MDA	1.08E-02
I-135	9.69E-03	1.10E-02	8.36E-03	<MDA	<MDA	<MDA	2.90E-02
Ce-144	<MDA	<MDA	<MDA	1.75E-05	<MDA	<MDA	1.75E-05
Co-57	<MDA	1.92E-04	<MDA	<MDA	<MDA	<MDA	1.92E-04
Co-58	2.41E-03	9.41E-03	3.10E-04	4.68E-06	4.66E-04	1.28E-04	1.27E-02
Co-60	7.23E-04	4.46E-02	9.40E-04	3.27E-04	1.06E-03	3.20E-04	4.79E-02
Cs-134	<MDA	5.24E-04	<MDA	<MDA	2.24E-04	<MDA	7.48E-04
Cs-137	5.34E-06	2.10E-03	1.90E-04	1.20E-04	1.83E-03	3.21E-04	4.56E-03
Cs-138	<MDA	7.71E-04	<MDA	<MDA	<MDA	<MDA	7.71E-04
Ag-110m	<MDA	2.49E-03	<MDA	<MDA	<MDA	<MDA	2.49E-03
Ba-140	<MDA	<MDA	<MDA	4.45E-05	<MDA	<MDA	4.45E-05
Mn-54	<MDA	3.74E-03	1.79E-04	2.03E-06	<MDA	<MDA	3.92E-03
Na-24	<MDA	2.70E-02	<MDA	<MDA	<MDA	<MDA	2.70E-02
Nb-95	<MDA	5.97E-04	<MDA	<MDA	<MDA	<MDA	5.97E-04
Ru-106	<MDA	6.49E-03	<MDA	<MDA	<MDA	<MDA	6.49E-03
Sb-125	<MDA	1.91E-03	<MDA	<MDA	<MDA	<MDA	1.91E-03
Sn-113	<MDA	1.74E-04	<MDA	<MDA	<MDA	<MDA	1.74E-04
Zr-95	<MDA	2.38E-04	<MDA	<MDA	<MDA	<MDA	2.38E-04
Sr-89	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Sr-90	(1)	(1)	(1)	(1)	(1)	(1)	(1)

(1) Information unavailable at time of report preparation.
Note: Dissolved noble gases detected in liquid effluents are included in airborne release totals.

2.0 RADIOACTIVE AIRBORNE RELEASES

The release paths contributing to radioactive airborne release totals during this reporting period were the auxiliary building vent stack, drumming area vent stack, gas stripper building vent stack, Unit 1 containment purge stack, Unit 2 containment purge stack, combined air ejector decay duct exhaust, and turbine building ventilation exhaust.

There were two gas decay tanks released during this reporting period.

2.1 Radioactive Airborne Release Summary

2.1.1 Releases During Current Reporting Period

Radioactivity released in airborne effluents for the current reporting period are summarized in Table 2-1.

2.1.2 Additions to Previous Semiannual Monitoring Report

The following information was not available at the time of the last report preparation and should be added to Table 2-1 of the Semiannual Monitoring Report for January 1, 1987, through June 30, 1987.

	January	February	March	April	May	June	6-Month Total (Ci)
Strontium (Ci)	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA

2.2 Isotopic Airborne Releases

2.2.1 Releases During Current Reporting Period

The monthly isotopic airborne releases for the current reporting period are presented in Table 2-2.

2.2.2 Additions to Previous Semiannual Monitoring Report

The following information was not available at the time of the previous report preparation and should be added to Table 2-2 of the Semiannual Monitoring Report covering the period January 1, 1987, through June 30, 1987.

	January	February	March	April	May	June	6-Month Total (Ci)
Sr-89	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA
Sr-90	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA

TABLE 2-1

RADIOACTIVE AIRBORNE RELEASE SUMMARY
JULY 1, 1987 TO DECEMBER 31, 1987

	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL
Total Noble Gases (Ci):(2)	2.31E+00	1.27E+00	1.29E+00	1.47E+01	2.66E+00	2.91E+00	2.51E+01
Total Radioiodines (Ci):	1.97E-04	4.85E-03	1.88E-04	1.12E-03	1.66E-04	9.20E-05	6.61E-03
Total Particulates (Ci):	4.05E-06	6.24E-04	6.62E-06	8.61E-05	2.51E-04	8.11E-06	8.98E-04
Alpha (Ci):	6.99E-07	<MDA	3.33E-11	8.01E-05	4.16E-07	<MDA	8.12E-05
Strontium (Ci):	(1)	(1)	(1)	(1)	(1)	(1)	(1)
All Others (Ci):	3.35E-06	6.24E-04	6.61E-06	6.00E-06	2.50E-04	8.11E-06	8.16E-04
Total Tritium (Ci):	5.64E+00	1.06E+01	7.60E+00	2.70E+01	4.33E+02	5.60E+00	4.89E+02
Maximum Hourly Average Release Rate (3) (Curies/Second)	8.62E-04	7.40E-04	2.56E-03	5.05E-03	1.40E-03	3.34E-04	
Total Equivalent Curies Released							
Co-60 Equivalent Curies	1.32E-05	1.10E-04	1.05E-05	5.03E-06	2.70E-03	7.45E-06	2.84E-03
% Annual RETS Limit	7.67E-04	6.39E-03	6.10E-04	2.92E-04	1.56E-01	4.33E-04	1.65E-01
I-131 Equivalent Curies	7.33E-05	7.18E-04	7.93E-05	7.18E-05	4.00E-05	3.97E-05	1.02E-03
% Annual RETS Limit	2.08E-02	2.03E-01	2.25E-02	2.03E-02	1.13E-02	1.12E-02	2.90E-01
Xe-133 Equivalent Curies (2)	4.39E+01	2.62E+01	2.72E+01	6.43E+01	6.01E+01	5.11E+01	2.72E+02
% Annual RETS Limit	4.22E-03	2.51E-03	2.61E-03	6.18E-03	5.77E-03	4.91E-03	2.62E-02
Tritium Equivalent Curies	5.64E+00	1.06E+01	7.60E+00	2.70E+01	4.33E+02	5.60E+00	4.89E+02
% Annual RETS Limit	1.94E-02	3.65E-02	2.62E-02	9.31E-02	1.49E+00	1.93E-02	1.68E+00

(1) Information unavailable at time of report preparation but values typically do not alter monthly totals.
(2) Includes noble gas contribution from liquid releases.
(3) Expressed as Xe-133 equivalents.

TABLE 2-2

ISOTOPIC COMPOSITION OF AIRBORNE DISCHARGES
JULY 1, 1987 TO DECEMBER 31, 1987

NUCLIDES RELEASED	JUL (Curies)	AUG (Curies)	SEPT (Curies)	OCT (Curies)	NOV (Curies)	DEC (Curies)	TOTAL (Curies)
Tritium	5.64E+00	1.06E+01	7.60E+00	2.70E+01	4.33E+02	5.60E+00	4.89E+02
Xe-133	1.66E-01	1.15E-01	7.67E-02	1.23E+01	7.81E-02	7.14E-01	1.34E+01
Xe-133m	<MDA	8.45E-03	<MDA	1.13E-01	<MDA	6.80E-03	1.28E-01
Xe-135	2.82E-01	2.09E-01	2.41E-01	4.87E-01	4.29E-01	3.68E-01	2.01E+00
Xe-135m	3.41E-01	1.25E-01	1.39E-01	2.54E-01	3.77E-01	3.02E-01	1.53E+00
Xe-138	6.79E-01	3.91E-01	4.11E-01	8.64E-01	1.05E+00	8.14E-01	4.20E+00
Kr-85	2.67E-01	3.00E-02	2.89E-02	<MDA	<MDA	2.03E-02	3.46E-01
Kr-85m	6.15E-02	3.65E-02	3.87E-02	8.28E-02	8.25E-02	9.00E-02	3.92E-01
Kr-87	1.60E-01	9.40E-02	9.57E-02	2.11E-01	2.39E-01	1.75E-01	9.74E-01
Kr-88	1.92E-01	9.53E-02	9.71E-02	2.22E-01	2.33E-01	2.04E-01	1.04E+00
Ar-41	1.64E-01	1.65E-01	1.63E-01	1.53E-01	1.71E-01	2.13E-01	1.02E+00
I-131	3.81E-05	2.70E-04	4.53E-05	3.77E-05	1.60E-05	2.34E-05	4.30E-04
I-132	<MDA	7.91E-04	<MDA	9.89E-04	5.13E-05	<MDA	1.83E-03
I-133	1.45E-04	1.53E-03	1.43E-04	9.59E-05	9.84E-05	6.87E-05	2.08E-03
I-134	<MDA	6.87E-04	<MDA	<MDA	<MDA	<MDA	6.87E-04
I-135	1.33E-05	1.58E-03	<MDA	<MDA	<MDA	<MDA	1.59E-03
Cd-109	<MDA	2.28E-04	<MDA	<MDA	<MDA	<MDA	2.28E-04
Cs-134	<MDA	<MDA	<MDA	<MDA	2.99E-05	<MDA	2.99E-05
Cs-137	1.12E-06	2.45E-07	6.45E-07	2.25E-07	2.06E-04	6.06E-07	2.08E-04
Cs-138	<MDA	2.66E-04	<MDA	<MDA	<MDA	<MDA	2.66E-04
Co-58	5.34E-07	2.17E-06	<MDA	5.00E-06	1.44E-05	2.38E-07	2.23E-05
Co-60	3.86E-07	<MDA	3.04E-06	5.64E-07	<MDA	5.28E-07	4.51E-06
Cr-51	<MDA	<MDA	<MDA	<MDA	<MDA	7.46E-10	7.46E-10
F-18	1.19E-06	1.19E-04	2.93E-06	<MDA	<MDA	<MDA	1.23E-04
Mo-99	<MDA	<MDA	<MDA	<MDA	<MDA	7.72E-09	7.72E-09
Nb-95	<MDA	<MDA	<MDA	2.72E-07	<MDA	<MDA	2.72E-07
Rb-88	1.20E-07	7.08E-06	<MDA	<MDA	<MDA	6.67E-06	1.38E-05
Tc-99m	<MDA	<MDA	<MDA	<MDA	<MDA	6.28E-08	6.28E-08
Sr-89	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Sr-90	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Alpha	6.98E-07	<MDA	3.33E-11	8.01E-05	4.16E-07	<MDA	8.12E-05

(1) Information unavailable at time of report preparation but values typically do not alter monthly totals reported in Table 2-1.

3.0 RADIOACTIVE SOLID WASTE SHIPMENTS

Shipments offsite of solid waste for burial during this reporting period were as follows.

DATE OF SHIPMENT TO BURIAL	VOLUME (CUBIC FEET)	TOTAL ACTIVITY CURIES	SITE
07-16-87	131.6 (3)	3.23E-01	Barnwell, SC
11-25-87	75.0 (1)	4.29E-03	Barnwell, SC
11-25-87	639.0 (1)	2.69E-02	Barnwell, SC
11-28-87	69[illegible].7 (1)	6.07E-02	Barnwell, SC
12-03-87	660.[illegible] (1)	2.02E-01	Barnwell, SC
12-04-87	622.5 (1)	1.70E-01	Barnwell, SC
12-04-87	157.5 (1)	1.60E+00	Barnwell, SC
12-05-87	30.0 (1)	1.35E-03	Barnwell, SC
12-08-87	23.2 (1)	1.18E-03	Barnwell, SC
12-17-87	177.5 (2)	3.67E+00	Barnwell, SC
12-17-87	177.5 (2)	3.67E+00	Barnwell, SC
12-21-87	177.5 (2)	1.41E+00	Barnwell, SC

(1) Dry Activated Waste
(2) Evaporator Bottoms
(3) Spent Resin

4.0 NEW & SPENT FUEL SHIPMENTS AND RECEIPTS

During this reporting period, a total of 32 new fuel assemblies were received from Westinghouse Electric Corporation for Unit 2. The new fuel assemblies received for Unit 2 were used for the Fall, 1987 refueling.

There were no spent fuel shipments made from Point Beach Nuclear Plant during this reporting period.

5.0 RADIOLOGICAL ENVIRONMENTAL MONITORING

Radiological environmental monitoring conducted at Point Beach Nuclear Plant from July 1, 1987 through December 31, 1987 consisted of air filters, milk, lake water, well water, soil, fish, shoreline sediments, algae, vegetation, and TLDs.

No significant deviations from normal results, attributable to the operation of the Point Beach Nuclear Plant, were identified during this six month reporting period.

No.	Sample Type	Low	Average	High	Units
	TLDs				
43	Environmental Radiation	0.93	1.40±0.52	2.00	mR/7 days
	Air				
156	Gross beta	0.01	0.02±0.02	0.04	pCi/m^3
156	Radioiodine		all <0.03		pCi/m^3
12	Cs-137		all <0.01		pCi/m^3
12	Cs-134		all <0.01		pCi/m^3
12	Other gamma emitters		all <0.01		pCi/m^3
	Milk				
18	Radioiodine		all <0.5		pCi/l
18	Sr-89		all <5		pCi/l
18	Sr-90	1.1	1.9±1.0	2.9	pCi/l
18	Cs-134		all <5		pCi/l
18	Cs-137		all <5		pCi/l
18	Ba-La-140		all <5		pCi/l
18	Other gamma emitters		all <5		pCi/l
	Lake Water				
30	Gross Beta	1.5	2.5±1.0	3.3	pCi/l
10	Tritium		all <500		pCi/l
10	Sr-89		all <5		pCi/l
10	Sr-90		all <1		pCi/l
30	Radioiodine		all <0.5		pCi/l
30	Mn-54		all <10		pCi/l
30	Fe-59		all <30		pCi/l
30	Co-58		all <10		pCi/l
30	Co-60		all <10		pCi/l
30	Zn-65		all <30		pCi/l
30	Zr-Nb-95		all <15		pCi/l
30	Cs-134		all <10		pCi/l
30	Cs-137		all <10		pCi/l
30	Ba-La-140		all <15		pCi/l
30	Other gamma emitters		all <30		pCi/l

No.	Sample Types	Low	Average	High	Units
	Well Water				
2	Gross Beta	2.6	4.1±4.1	5.5	pCi/l
2	H-3		all <500		pCi/l
2	Sr-89		all <5		pCi/l
2	Sr-90		all <1		pCi/l
2	I-131		all <0.5		pCi/l
2	Mn-54		all <10		pCi/l
2	Fe-59		all <30		pCi/l
2	Co-58		all <10		pCi/l
2	Co-60		all <10		pCi/l
2	Zn-65		all <30		pCi/l
2	Zr-Nb-95		all <15		pCi/l
2	Cs-134		all <10		pCi/l
2	Cs-137		all <10		pCi/l
2	Ba-La-140		all <15		pCi/l
2	Other Gamma Emitters		all <30		pCi/l
	Fish				
3	Gross Beta	1.5	2.4±1.5	2.9	pCi/g wet
3	Mn-54		all <0.13		pCi/g wet
3	Fe-59		all <0.26		pCi/g wet
3	Co-58		all <0.13		pCi/g wet
3	Co-60		all <0.13		pCi/g wet
3	Zn-65		all <0.26		pCi/g wet
3	Cs-134		all <0.13		pCi/g wet
3	Cs-137		all <0.15		pCi/g wet
3	Other Gamma Emitters		all <0.5		pCi/g wet
	Soil				
8	Gross Beta	12.8	19.8±9.0	25.8	pCi/g dry
8	Cs-137	0.29	0.51±0.45	1.02	pCi/g dry
8	Other Gamma Emitters		all <0.15		pCi/g dry
	Shoreline Sediment				
5	Gross Beta	4.9	10.2±7.6	15.7	pCi/g dry
5	Cs-137		all <0.15		pCi/g dry
5	Other Gamma Emitters		all <0.15		pCi/g dry
	Vegetation				
16	Gross Beta	1.2	6.1±4.4	16.0	pCi/g wet
16	Cs-137	<0.08	<0.08±0.0	0.08	pCi/g wet
16	Cs-134		all <0.06		pCi/g wet
16	I-131		all <0.06		pCi/g wet
16	Other Gamma Emitters		all <0.25		pCi/g wet

No.	Sample Types	Low	Average	High	Units
	Algae				
4	Gross Beta	0.7	2.6±5.2	6.4	pCi/g wet
4	Co-58		all <0.25		pCi/g wet
4	Co-60		all <0.25		pCi/g wet
4	Cs-134		all <0.25		pCi/g wet
4	Cs-137		all <0.25		pCi/g wet
4	Other Gamma Emitters		all <0.25		pCi/g wet

6.0 NON-RADIOACTIVE CHEMICAL RELEASES

6.1 Scheduled Chemical Waste Releases*

Scheduled chemical waste releases to the circulating water system from July 1, 1987, to December 31, 1987, included 4.50E+06 gallons of neutralized wastewater. The wastewater contained 5.50E+02 pounds of suspended solids and 5.15E+05 pounds of dissolved solids.

*Scheduled chemical waste releases are based on the average analytical results obtained from sampling a representative number of neutralizing tanks.

6.2 Miscellaneous Chemical Waste Releases*

Miscellaneous chemical waste releases from the retention pond (based on effluent analyses) to the circulating water for July 1, 1987, to December 31, 1987, included 2.24E+07 gallons of clear wastewater. The wastewater contained 1.12E+03 pounds of suspended solids.

*Miscellaneous chemical waste released directly to the circulating water, based on amount of chemicals received, for July 1, 1987, to December 31, 1987, included 1.48E+05 pounds of sodium bisulfite and 7.85E+04 pounds of sodium hypochlorite.

7.0 CIRCULATING WATER SYSTEM OPERATION

The circulating water system operation during this reporting period for periods of plant operation is described in Table 7-1.

8.0 LEAK TESTING OF RADIOACTIVE SOURCES

During this reporting period all applicable sealed radioactive sources were leak tested in accordance with Technical Specification 15.4.12. Leak test results were all <0.005 μCi.

TABLE 7-1

CIRCULATING WATER SYSTEM OPERATION
JULY 1, 1987, TO DECEMBER 31, 1987

		JUL	AUG	SEP	OCT	NOV	DEC
Average Volume Cooling Water Discharge (Million gal/day)	UNIT 1	554.4	555.6	555.6	566.1	560.2	385.8
	UNIT 2	554.4	533.2	555.5	377.3*	484.4*	383.6
Average Cooling Water Intake Temperature (Degrees F)	UNIT 1	55.9	62.9	58.7	48.5	42.9	37.4
	UNIT 2	55.9	63.2	58.7	58.4*	40.3*	37.4
Average Cooling Water Discharge Temperature (Degrees F)	UNIT 1	74.4	80.9	77.2	68.3	61.5	64.1
	UNIT 2	74.4	81.8	77.9	76.3*	58.9*	63.8
Average Ambient Lake Temperature (Degrees F)		55.3	62.8	58.9	49.2	43.2	37.6

(* = Unit 2 refueling shutdown from October 3, 1987, to November 18, 1987.)

9.0 MISCELLANEOUS REPORTING REQUIREMENTS

9.1 Revisions to the PBNP Offsite Dose Calculation Manual (ODCM) and Process Control Program (PCP)

No revisions were made to the PCP during this reporting period. However, changes were made to the ODCM. The new revisions cannot effectively be identified in the Semiannual Report. Therefore, a complete copy of the ODCM will be forwarded to the Nuclear Regulatory Commission.

9.2 Interlaboratory Comparison Program

The analytical laboratory contracted to perform the radioanalyses of PBNP environmental samples participated in the EPA Interlaboratory Comparison Program during this reporting period.

9.3 Deviations from Specified Environmental Sample Types, Locations, and Frequencies

No deviations from sampling types, frequencies, and locations specified in Technical Specification 15.7.7 occurred during this reporting period other than the loss of the TLD from sampling location 17.

9.4 Summary of Unachievable Specified Environmental LLDs

LLDs listed in Table 15.7.7-2 of the PBNP Technical Specifications were accomplished for all samples during this reporting period.

9.5 Special Circumstances

No special circumstances report regarding operation of the explosive gas monitor for the waste gas holdup system were needed during this reporting period.