

WISCONSIN ELECTRIC

POWER COMPANY

POINT BEACH NUCLEAR PLANT

UNIT NOS. 1 AND 2

Semiannual

Monitoring Report

July 1, 1979 through December 31, 1979

POOR ORIGINAL

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

8008070

359

TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
1.0	RADIOACTIVE LIQUID RELEASES	1
2.0	RADIOACTIVE AIRBORNE RELEASES	4
3.0	RADIOACTIVE SOLID WASTE SHIPMENTS	8
4.0	NEW AND SPENT FUEL SHIPMENTS AND RECEIPTS	8
5.0	RADIOLOGICAL ENVIRONMENTAL MONITORING	9
6.0	NON-RADIOLOGICAL ENVIRONMENTAL MONITORING	10
7.0	NON-RADIOACTIVE CHEMICAL RELEASES	11
8.0	CIRCULATING WATER SYSTEM OPERATIONS	12
9.0	LEAK TESTING OF RADIOACTIVE SOURCES	12

1.0 RADIOACTIVE LIQUID RELEASES

Radioactive liquid releases via the circulating water discharge are summarized for total release and by individual source on a monthly basis in Table 1-1. An isotopic breakdown of the total radioactive liquid release is presented in Table 1-2.

The total radioactive liquid release excluding tritium for this reporting period was 3.77E-1 Curies which included 2.60E-2 Curies of processed radioactive waste and primary coolant system letdown, 3.40E-1 Curies of Unit 1 steam generator blowdown, 1.10E-2 Curies of Unit 2 steam generator blowdown and 1.83E-4 Curies of retention pond effluent. The total tritium release for this reporting period was 436 Curies, which included 428 Curies of processed radioactive waste and primary coolant system letdown, 5.45 Curies of Unit 1 steam generator blowdown, 1.99 Curies of Unit 2 steam generator blowdown, and 1.32 Curies of retention pond effluent. All radioactive liquid releases to Lake Michigan were made through the circulating water discharge.

1.1 Additions to Semiannual Monitoring Report January 1, 1979, through June 30, 1979

	<u>May</u>	<u>June</u>	<u>Total</u>
Total Activity Released, Ci			
Gross Alpha	<MDA	8.64E-7	1.50E-6
Average Diluted Discharge Concentration, μ Ci/cc			
Gross Alpha	----	1.32E-14	
% MPC	----	4.42E-5	

The following data which was not available at time of report preparation should be added to Table 1-2 of the Semiannual Monitoring Report January 1, 1979, through June 30, 1979.

	<u>May</u>	<u>June</u>	<u>Total</u>
Sr-89	<MDA	<MDA	3.75E-6
Sr-90	<MDA	<MDA	<MDA
Alpha	<MDA	8.64E-7	1.50E-6

TABLE 1-1

RADIOACTIVE LIQUID CIRCULATING WATER RELEASE SUMMARY
PERIOD JULY 1 TO DECEMBER 31, 1979

	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>Total</u>
Total Activity Released, Ci							
Beta-Gamma (1)	1.90E-02	1.67E-01	5.28E-02	6.33E-02	3.67E-02	3.82E-02	3.77E-01
Gross Alpha	5.00E-07	7.10E-07	1.17E-07	6.81E-07	(3)	3.51E-07	(3)
Tritium	3.20E+01	9.67E+01	1.06E+02	1.04E+02	3.73E+01	6.00E+01	4.36E+02
Total Volumes Released, Gal:							
Processed Waste	6.62E+04	3.74E+05	1.54E+05	1.80E+05	2.65E+05	1.85E+05	1.22E+06
Steam Generator Blowdown, Unit 1	2.57E+06	1.02E+06	2.89E+06	4.50E+05	8.21E+05	1.89E+06	9.64E+06
Steam Generator Blowdown, Unit 2	1.09E+06	2.94E+06	2.78E+06	3.00E+06	2.80E+06	2.74E+06	1.54E+07
Retention Pond	1.73E+06	2.53E+06	1.65E+06	1.37E+06	1.70E+06	2.63E+06	1.16E+07
Total	5.46E+06	6.86E+06	7.47E+06	5.00E+06	5.59E+06	7.44E+06	3.78E+07
Volume of Dilution Water, ml	4.87E+13	3.84E+13	6.84E+13	2.29E+13	1.13E+13	3.35E+13	2.23E+14
Average Diluted Discharge Concentration, $\mu\text{Ci/cc}$							
Gross Beta-Gamma	3.90E-10	4.33E-09	7.70E-09	2.77E-09	3.24E-09	1.14E-09	1.14E-09
% MPC	2.30E-02	1.40E-01	7.54E-02	3.56E-01	3.39E-02	6.08E-02	
Gross Alpha	1.03E-14	1.85E-14	1.71E-15	2.97E-14	(3)	1.05E-14	
% MPC	3.42E-05	6.16E-05	5.69E-06	9.91E-05	(3)	3.49E-05	
Tritium	6.57E-07	2.52E-06	1.55E-06	4.54E-06	3.30E-06	1.79E-06	
% MPC	2.19E-02	8.39E-02	5.17E-02	1.51E-01	1.10E-01	5.97E-02	
Maximum Discharge Concentration During Release Period, $\mu\text{Ci/cc}$							
Gross Beta-Gamma (1)	9.68E-10	3.52E-07	1.12E-08	2.27E-08	5.00E-09	1.05E-07	
Tritium	4.47E-05	6.59E-05	5.62E-05	5.82E-05	6.12E-05	1.02E-04	

NOTES: (1) Not including Strontium results which generally have a negligible effect.
(2) Summation of the individual isotopic 10 CFR 20, Appendix B Table II MPC's.
(3) Data unavailable at time of report writing.

TABLE 1-2

ISOTOPIC COMPOSITION OF CIRCULATING WATER DISCHARGES
PERIOD JULY 1 TO DECEMBER 31, 1979

Nuclides Released	July (Curies)	August (Curies)	September (Curies)	October (Curies)	November (Curies)	December (Curies)	Total (Curies)
H-3	3.20E+01	9.67E+01	1.06E+02	1.04E+02	3.37E+01	6.00E+01	4.36E+02
F-18	2.36E-04	1.92E-03	8.70E-04	1.38E-03	7.03E-04	3.30E-03	8.41E-03
Cr-51	<MDA	<MDA	2.11E-04	<MDA	<MDA	3.24E-04	5.35E-04
Mn-54	5.75E-05	3.79E-03	<MDA	7.99E-07	1.40E-03	1.60E-03	6.85E-03
Co-57	<MDA	<MDA	<MDA	<MDA	<MDA	3.16E-05	3.16E-05
Co-58	<MDA	3.02E-02	1.93E-03	1.85E-04	1.18E-03	7.25E-03	4.07E-02
Co-60	5.09E-04	6.54E-03	3.88E-04	2.04E-04	8.97E-04	4.58E-03	1.31E-02
Fe-59	<MDA	9.17E-05	<MDA	<MDA	<MDA	<MDA	9.17E-05
Kr-85m	<MDA	<MDA	<MDA	<MDA	<MDA	4.70E-05	4.70E-05
Rb-88	<MDA	<MDA	2.18E-02	<MDA	<MDA	1.30E-04	2.19E-02
Sr-89	<MDA	1.56E-05	<MDA	3.47E-05	1.50E-05	<MDA	6.53E-05
Sr-90	<MDA	<MDA	1.11E-06	8.85E-06	6.90E-06	<MDA	1.69E-05
Zr-95	<MDA	1.30E-03	<MDA	<MDA	1.03E-04	9.26E-05	1.50E-03
Nb-95	<MDA	5.38E-04	<MDA	<MDA	8.31E-05	4.49E-04	1.07E-03
Mo-99	<MDA	1.17E-04	<MDA	1.05E-04	<MDA	5.69E-04	7.91E-04
Ru-103	<MDA	1.75E-03	<MDA	3.89E-05	1.77E-05	1.88E-04	1.99E-03
Sn-113	<MDA	<MDA	<MDA	<MDA	2.94E-05	4.85E-05	7.79E-05
Sb-124	<MDA	1.78E-04	<MDA	<MDA	<MDA	5.14E-05	2.29E-04
Sb-125	<MDA	<MDA	<MDA	3.81E-05	<MDA	4.18E-04	4.56E-04
I-131	9.88E-04	9.81E-03	1.12E-02	1.58E-02	3.39E-04	4.38E-03	4.25E-02
I-132	9.36E-04	3.24E-02	7.87E-04	6.54E-03	<MDA	6.65E-04	4.13E-02
I-133	6.06E-03	9.20E-03	4.66E-03	2.49E-02	7.89E-04	3.30E-03	4.89E-02
I-134	2.27E-03	9.58E-04	<MDA	9.44E-05	<MDA	8.39E-04	4.16E-03
I-135	3.19E-03	3.72E-03	<MDA	9.24E-03	<MDA	1.14E-03	1.73E-02
Te-132	<MDA	4.88E-05	<MDA	2.04E-05	<MDA	<MDA	6.92E-05
Xe-131m	<MDA	<MDA	<MDA	<MDA	<MDA	3.10E-04	3.10E-04
Xe-133	4.22E-04	3.20E-03	2.21E-03	6.44E-04	<MDA	2.51E-03	8.99E-03
Xe-135	1.68E-05	1.42E-03	1.24E-04	3.13E-04	<MDA	4.72E-04	2.35E-03
Cs-134	6.98E-04	2.56E-03	6.51E-04	5.73E-04	4.96E-03	4.55E-04	9.90E-03
Cs-137	2.23E-03	5.42E-03	3.02E-03	2.28E-03	2.61E-02	3.21E-03	4.23E-02
Cs-138	1.43E-03	5.84E-03	3.23E-03	9.69E-04	<MDA	1.09E-03	1.26E-02
Ce-139	<MDA	<MDA	1.58E-04	<MDA	<MDA	<MDA	1.58E-04
Ce-144	<MDA	<MDA	<MDA	<MDA	<MDA	1.21E-05	1.21E-05
Ba-140	<MDA	2.70E-02	1.21E-03	<MDA	<MDA	4.04E-04	2.86E-02
La-140	<MDA	1.84E-02	1.80E-04	<MDA	<MDA	2.86E-04	1.89E-02
Alpha	5.00E-07	7.10E-07	1.17E-07	6.81E-07	(1)	3.51E-07	(1)
TOTAL	-----	-----	-----	-----	-----	-----	3.77E-01 ⁽²⁾

NOTES: <MDA - Less than minimum detectable activity.

(1) - Data unavailable at report time.

(2) - Total does not include tritium, or alpha.

2.0 RADIOACTIVE AIRBORNE RELEASES

Radioactive airborne releases during normal plant operation are reported by total release in Table 2-1, and summarized by isotope in Table 2-2. The release paths contributing to radioactive airborne releases during this reporting period were the auxiliary building vent stack, Unit 1 containment purge stack, Unit 2 containment purge stack, drumming area vent stack, gas stripper building ventilation exhaust, combined air ejector decay duct exhaust and turbine building ventilation exhaust.

There were five gas decay tank releases during this report period.

2.1 Additions to the Semiannual Monitoring Report, January 1, 1979, through June 30, 1979

The following data which was not available at the time of the report preparation should be added to Table 2-2 in Section 2.0 of the Semiannual Monitoring Report covering the period January 1, 1979, through June 30, 1979.

	<u>April</u>	<u>May</u>	<u>June</u>	<u>Total, Ci</u>
Sr-89	3.01E-08	2.03E-08	2.01E-08	6.52E-07
Sr-90	9.38E-08	8.88E-08	8.62E-08	3.11E-07

2.2 Corrections to the Semiannual Monitoring Report, January 1, 1979, through June 30, 1979

The following corrections should be made to Table 2-2 in Section 2.0 of the Semiannual Monitoring Report covering the period January 1, 1979, through June 30, 1979.

	<u>January</u>	<u>February</u>	<u>March</u>
Sr-90	1.27E-08	1.15E-08	1.82E-08

2.3 Corrections to the Semiannual Monitoring Reports for Calendar Year 1978

2.3.1 Corrections to the Semiannual Monitoring Report, January 1, 1978, through June 30, 1978

The following corrections should be made to Table 2-2 in Section 2.0 of the Semiannual Monitoring Report covering the period January 1, 1978, through June 30, 1978.

	<u>April</u>	<u>May</u>	<u>June</u>	<u>Total</u>
Sr-89	1.02E-07	9.40E-08	9.10E-08	6.93E-07
Sr-90	2.43E-08	1.92E-08	1.43E-08	5.78E-08

2.3.2 Corrections to the Semiannual Monitoring Report,
July 1, 1978, through December 31, 1978

The following corrections should be made to Table 2.2 in Section 2.0 of the Semiannual Monitoring Report covering the period July 1, 1978, through December 31, 1978.

	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>
Sr-89	7.87E-08	7.87E-08	7.63E-08	4.13E-07
	<u>November</u>	<u>December</u>	<u>Total</u>	
Sr-89	4.00E-07	4.13E-07	1.46E-06	
	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>
Sr-90	1.57E-08	1.57E-08	1.53E-08	<MDA
	<u>November</u>	<u>December</u>	<u>Total</u>	
Sr-90	<MDA	<MDA	4.67E-08	

TABLE 2-1

RADIOACTIVE AIRBORNE RELEASE SUMMARY
PERIOD JULY 1 TO DECEMBER 31, 1979

	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>Total</u>
Total Curies Released (Excluding Tritium)	8.61E+01	2.51E+02	1.10E+02	1.91E+01	1.46E+01	2.64E+02	7.45E+02
Total Xe-133 Equivalent Curies Released ¹	6.34E+02	2.80E+03	1.27E+03	3.30E+02	1.08E+02	6.38E+02	5.78E+03
Average Release Rate (Curies/Second) ²	2.36E-04	1.04E-03	4.89E-04	1.23E-04	4.2E-05	2.38E-04	
Percent of Annual Tech- nical Specification Limits ³	1.18E-01	5.22E-01	2.44E-01	6.16E-02	2.08E-02	1.19E-01	
Maximum Hourly Average Release Rate (Curies/Second) ⁴	1.28E-03	1.24E-02	1.23E-02	1.33E-03	4.61E-05	7.58E-03	
Monthly Average Site Boundary Concentration (μ Ci/cc) ²	3.55E-10	1.56E-09	7.33E-10	1.85E-10	6.25E-11	3.57E-10	

¹ All gaseous and particulate releases are converted to "¹³³Xe equivalent" for calculational purposes using the ratio MPC_{Xe-133}/MPC_i . MPC's for isotopes of iodine and particulate with half-lives longer than eight days are reduced by a factor of 700.

² Averaged over one month and based on Xe-133 equivalent.

³ Annual average Technical Specification limits are 0.2 Ci/sec Xe-133 based on $X/Q - 1.5 \times 10^{-6} \text{ sec/m}^3$. Maximum Technical Specification limits are 2.0 Ci/sec Xe-133 based on $X/Q - 1.5 \times 10^{-6} \text{ sec/m}^3$.

⁴ Expressed as Xe-133 equivalent.

TABLE 2-2

RADIOACTIVE AIRBORNE RELEASE SUMMARY
PERIOD JULY 1 TO DECEMBER 31, 1979

	July (Curies)	August (Curies)	September (Curies)	October (Curies)	November (Curies)	December (Curies)	Total (Curies)
Tritium	7.57E+01	6.71E+01	1.04E+01	7.66E+01	1.13E+02	1.22E+02	4.65E+02
Noble Gases							
Ar-41	1.28E+01	1.76E+01	5.92E+00	3.03E+00	3.07E+00	2.78E+00	4.52E+01
Kr-85	4.96E-01	6.07E+00	1.01E+00	3.20E-01	1.01E+00	1.51E+01	2.40E+01
Kr-85m	8.53E+00	2.28E+01	6.94E+00	1.24E+00	2.12E-01	2.34E+00	4.21E+01
Kr-87	3.44E+00	1.03E+01	5.05E+00	8.75E-01	2.40E-01	1.72E+00	2.16E+01
Kr-88	1.16E+01	3.97E+01	1.26E+01	2.06E+00	3.43E-01	3.29E+00	6.96E+01
Xe-133	5.57E+00	3.11E+01	2.51E+01	2.53E+00	7.43E+00	1.95E+02	2.67E+02
Xe-133m	1.87E-01	2.82E-01	1.23E+00	2.18E-02	6.66E-02	3.68E-01	2.16E+00
Xe-135	3.78E+01	1.15E+02	4.38E+01	5.56E+00	9.99E-01	4.18E+01	2.45E+02
Xe-135m	2.56E+00	3.13E+00	2.86E+00	1.53E+00	4.65E-01	8.24E-01	1.14E+01
Xe-138	3.15E+00	5.41E+00	4.96E+00	1.92E+00	7.26E-01	1.08E+00	1.72E+01
Particulates with Half Lives Less Than Eight Days							
F-18	<MDA	<MDA	<MDA	1.38E-07	<MDA	1.42E-03	1.42E-03
Mn-56	5.74E-06	<MDA	<MDA	<MDA	<MDA	<MDA	5.74E-06
Rb-88	5.33E-02	1.37E-03	2.81E-03	7.48E-05	<MDA	1.76E-05	5.76E-02
Sr-91	<MDA	<MDA	<MDA	<MDA	MDA	1.66E-06	1.66E-06
Mo-99	<MDA	6.20E-06	<MDA	<MDA	<MDA	1.34E-06	7.54E-06
Te-132	2.28E-06	9.78E-07	8.77E-07	<MDA	<MDA	1.39E-06	5.53E-06
Cs-136	<MDA	<MDA	4.06E-06	<MDA	<MDA	<MDA	4.06E-06
Cs-138	9.26E-03	7.00E-04	1.13E-03	1.27E-05	3.37E-06	4.54E-05	1.12E-02
La-140	<MDA	7.36E-05	6.53E-07	<MDA	<MDA	4.58E-09	7.43E-05
Particulates with Half Lives Greater Than Eight Days and Iodines							
Cr-51	<MDA	6.41E-04	<MDA	<MDA	<MDA	2.22E-08	6.41E-04
Mn-54	<MDA	2.05E-05	4.49E-07	<MDA	<MDA	5.76E-09	2.10E-05
Co-57	<MDA	2.61E-05	<MDA	<MDA	<MDA	9.00E-10	2.61E-05
Co-58	8.50E-04	1.11E-03	8.44E-06	1.56E-05	2.00E-05	4.16E-06	2.00E-03
Co-60	6.05E-04	8.04E-04	1.48E-05	2.82E-05	8.04E-06	5.86E-06	1.47E-03
Sr-89	4.70E-07	4.81E-07	4.55E-07	(1)	(1)	(1)	(1)
Sr-90	8.54E-08	8.11E-08	8.73E-08	(1)	(1)	(1)	(1)
Nb-95	<MDA	2.62E-04	8.81E-08	<MDA	1.23E-06	3.00E-06	2.66E-04
Zr-95	<MDA	5.60E-05	5.15E-10	<MDA	1.36E-06	1.56E-06	5.90E-05
Ru-103	<MDA	4.27E-04	<MDA	2.44E-08	1.83E-06	2.09E-06	4.31E-04
Cd-109	6.95E-04	<MDA	1.42E-06	<MDA	<MDA	3.21E-04	1.02E-03
Sn-113	<MDA	6.88E-07	<MDA	<MDA	<MDA	<MDA	6.88E-07
Sb-125	<MDA	<MDA	<MDA	<MDA	<MDA	5.61E-09	5.61E-09
I-131	2.95E-03	2.07E-04	2.60E-04	7.99E-05	1.89E-05	4.10E-05	3.56E-03
I-132	<MDA	1.59E-03	1.07E-03	1.10E-04	1.45E-05	4.04E-04	3.19E-03
Ba-133	2.30E-04	<MDA	<MDA	<MDA	<MDA	<MDA	2.30E-04
..33	6.27E-03	1.19E-04	1.14E-04	1.29E-05	1.03E-07	1.90E-05	6.53E-03
Cs-134	2.74E-04	4.13E-06	4.63E-06	4.62E-07	8.72E-07	2.13E-06	2.86E-04
I-134	<MDA	6.31E-07	<MDA	2.29E-08	<MDA	1.15E-05	1.22E-05
I-135	<MDA	1.21E-05	<MDA	4.93E-06	<MDA	1.16E-05	2.86E-05
Cs-137	5.52E-04	7.67E-06	1.27E-05	1.23E-06	4.68E-06	3.10E-05	6.09E-04
Ce-139	9.15E-09	<MDA	<MDA	1.54E-09	<MDA	<MDA	1.07E-08
Ba-140	<MDA	5.71E-07	5.90E-08	<MDA	<MDA	7.98E-09	6.38E-07
Ce-141	1.34E-07	2.03E-04	<MDA	<MDA	1.36E-06	3.39E-06	2.08E-04
Ce-144	<MDA	<MDA	<MDA	<MDA	6.92E-07	<MDA	6.92E-07
Alpha	<MDA	4.58E-07	<MDA	<MDA	<MDA	2.44E-08	4.82E-07

NOTES: <MDA - Less than minimum detectable activity.
(1) - Data unavailable at report time.

3.0 RADIOACTIVE SOLID WASTE SHIPMENTS

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

<u>Date</u>	<u>Volume (Ft. ³)</u>	<u>Total Activity (Ci)</u>
07-18-79	126	657 ⁽¹⁾
07-18-79	58	25.8
08-07-79	569.5	0.389
09-12-79	774.7	0.38
09-20-79	60	0.939
09-25-79	60	0.914
11-08-79	562.5	0.492
11-15-79	60	1.65
12-11-79	585	0.813
12-12-79	60	7.78
	<hr/>	
	2,916	696

(1) Involved spent resin

4.0 NEW AND SPENT FUEL SHIPMENTS AND RECEIPTS

During this reporting period, a total of 28 new fuel assemblies were received from Westinghouse Electric Corporation for Unit 1. No new fuel assemblies were received for Unit 2. No spent assemblies were shipped from Unit 1 or 2.

5.0 RADIOLOGICAL ENVIRONMENTAL MONITORING

Radiological environmental monitoring conducted by Point Beach Nuclear Plant for the period from July 1, 1979, through December 31, 1979, consisted of air filters, gamma dose, vegetation, lake water, well water, milk, shoreline silt, soil, algae, and fish samples collected and analyzed in accordance with Technical Specification 15.4.10.

All measurements obtained this period are well within the normal range, and no unusual results or significant departures from normal were noted.

<u>No.</u>	<u>Sample Type</u>	<u>Low</u>	<u>Average*</u>	<u>High</u>	<u>Units</u>
<u>TLDs</u>					
32	Quarterly	0.20	0.83 \pm 0.54	1.34	mR/wk
<u>Air Filters</u>					
150	Gross Beta	<0.01	0.043 \pm 0.057	0.28	pCi/m ³
150	Radioiodine	---	all <0.03	---	pCi/m ³
12	Gamma Scan				
	Ce-144	---	all <0.01	---	pCi/m ³
	Cs-137	<0.001	<0.002 \pm 0.002	0.004	pCi/m ³
	Others	---	all <0.001	---	pCi/m ³
<u>Milk</u>					
18	Radioiodine	---	all <0.5	---	pCi/l
18	Sr-89	---	all <5	---	pCi/l
18	Sr-90	1	4 \pm 3	7	pCi/l
18	Gamma Scan	---	all <5	---	pCi/l
<u>Lake Water</u>					
30	Gross Beta	<1	4 \pm 5	8	pCi/l
30	Gamma Scan	---	all <10	---	pCi/l
10	Tritium	<0.5	0.5 \pm 0.3	0.8	pCi/ml
10	Sr-89	<5	<5	<6	pCi/l
10	Sr-90	<1	<2 \pm 4	<6	pCi/l
<u>Well Water</u>					
2	Gross Beta	<1	<1.5	2	pCi/l
2	Gamma Scan	---	both <10	---	pCi/l
2	Tritium	---	both <0.5	---	pCi/ml
2	Sr-89	---	both <5	---	pCi/l
2	Sr-90	---	both <1	---	pCi/l
<u>Vegetation</u>					
16	Gross Beta	2	7 \pm 7	15	pCi/g (wet)
16	Gamma Scan	---	all <1	---	pCi/g (wet)

<u>No.</u>	<u>Sample Type</u>	<u>Low</u>	<u>Average*</u>	<u>High</u>	<u>Units</u>
<u>Soil</u>					
9	Gross Beta	2	$3 + 2$	4	pCi/g (dry)
9	Gamma Scan	---	all <1	---	pCi/g (dry)
<u>Algae</u>					
4	Gross Beta	<1	$2 + 3$	3	pCi/g (wet)
4	Gamma Scan	---	all <1	---	pCi/g (wet)
<u>Fish</u>					
6	Gross Beta	1	$2 + 2$	3	pCi/g (wet)
6	Gamma Scan	---	all <1	---	pCi/g (wet)
<u>Shoreline Silt</u>					
5	Gross Beta	1	$2 + 2$	2	pCi/g (wet)
5	Gamma Scan	---	all <1	---	pCi/g (wet)

6.0 NON-RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

In accordance with Amendment numbers 29 and 33 to Facility Operating Licenses DPR-24 and DPR-27 respectively, dated November 4, 1977, the Environmental Technical Specifications for the Point Beach Nuclear Plant Units 1 and 2 were modified to allow temporary suspension of the non-radiological environmental monitoring program pending NRC review of the summary report of the five years of monitoring. As a result, the semiannual report specified by item 16.6.2.a of the Technical Specification is not applicable.

7.0 NON-RADIOACTIVE CHEMICAL RELEASES

7.1 Scheduled Chemical Waste Releases

Scheduled chemical waste releases to the circulating water system for the period of 07-01-79 to 12-31-79 included 3,217,292 gallons of neutralized clear water waste. The waste water contained 638 pounds of suspended solids and 183,123 pounds of dissolved solids.* When averaged over the reporting period, these discharges represented 37.79% of the Technical Specification limit for dissolved solids and .277% of the Technical Specification limit for suspended solids.**

The concentration increases of chemical waste in the circulating water system during the period of chemical releases ranged from 4.89 to 7.89 ppm dissolved solids and from 3.14E-04 to 8.45E-02 ppm suspended solids.**

Plant chemical records indicated that the following amounts of chemicals were released in the form of neutralized waste:

Sodium	48,211 pounds
Sulfate	109,536 pounds

* Chemical releases calculated are based upon neutralized tank analysis prior to discharge.

** Based on calculations during times of actual discharges.

7.2 Miscellaneous Chemical Waste Releases

Miscellaneous chemical waste releases to the circulating water system from the retention pond for the period of 07-01-79 to 12-31-79 included 11,600,000 gallons of clear water waste. The waste water contained 1,680 pounds of suspended solids and 84,200 pounds of dissolved solids.* When averaged over the reporting period, these discharges were 2.49% of the Technical Specification limit for dissolved solids and 0.089% of the limit for suspended solids.

Retention pond analysis and plant chemical records indicate that the following chemicals were released in the form of clear water waste from the retention pond.

Sodium	7,689 pounds
Chloride	11,866 pounds
Phosphate	130 pounds

The balance of the dissolved solids were in the form of soluble calcium and magnesium compounds resulting from the plant makeup water cold lime softening process.

* Chemical release calculations are based on retention pond analyses during the period 07-01-79 to 12-31-79.

8.0 CIRCULATING WATER SYSTEM OPERATIONS

The circulating water system operation during this reporting period for periods of plant operation is described in Table 8-1.

9.0 LEAK TESTING OF RADIOACTIVE SOURCES

During the reporting period, all applicable sealed radioactive sources were leak tested according to Technical Specification requirement 15.4.12. Results of the leak testing showed no removable contamination greater than 0.005 micro-Curies from sealed radioactive sources.

TABLE 8-1

CIRCULATING WATER SYSTEM OPERATION

		<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Average Volume Cooling Water Discharge, Million Gal/Day	UNIT 1	598.1	505.9 ⁽²⁾	579.8	511.2 ⁽¹⁾	270.9 ⁽¹⁾	327.9 ⁽²⁾
	UNIT 2	474.3 ⁽⁴⁾	596.7	593.1	634.9	633.4	434.2
Average Cooling Water Intake Temperature Degrees F	UNIT 1	55.6	57.2 ⁽²⁾	55.3	53.1 ⁽¹⁾	41.6 ⁽¹⁾	37.9 ⁽²⁾
	UNIT 2	55.4 ⁽⁴⁾	58.1	54.9	52.3	43.3	39.0
Average Cooling Water Discharge Temperature Degrees F	UNIT 1	71.9	69.2 ⁽²⁾	71.4	64.4 ⁽¹⁾	43.3 ⁽¹⁾	53.7 ⁽²⁾
	UNIT 2	67.9 ⁽⁴⁾	74.0	70.6	67.7	58.1	61.5
Average Ambient Temperature Degrees F	UNIT 1	52.4	55.3	52.5	50.6	41.7	35.7
	UNIT 2	(3)	(3)	(3)	(3)	(3)	(3)

(1) Unit 1 was shut down for refueling from October 8, 1979, to November 22, 1979.

(2) Unit 1 was shut down for steam generator maintenance from August 7, 1979, to August 19, 1979, and December 17, 1979, to December 21, 1979.

(3) Instrumentation out-of-service.

(4) Unit 2 was shut down for maintenance from July 7, 1979, to July 19, 1979.