



Wisconsin
Electric
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U. S. NUCLEAR REGULATORY COMMISSION
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Gentlemen:

DOCKETS 50-266 AND 50-301
SEMIANNUAL MONITORING REPORT
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Enclosed is the Semiannual Monitoring Report for Point Beach Nuclear Plant, Units 1 and 2, for the period July 1 through December 31, 1991. This report is submitted in accordance with Technical Specification 15.7.8.4.A and contains information regarding plant releases, solid waste shipments, new and spent fuel shipments, environmental monitoring, circulating water system operations, leak testing of sources, and other miscellaneous reportable items from this reporting period. Three copies of this report are provided for your convenience.

Sincerely,

James J. Zach
Vice President
Nuclear Power

Enclosures

Copies to NRC Regional Administrator, Region III
NRC Resident Inspector

9203040191 911231
PDR ADOCK 05000266
R PDR

A subsidiary of Wisconsin Energy Corporation

IFAS
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<u>No.</u>	<u>Sample Type</u>	<u>Low</u>	<u>Average</u>	<u>High</u>	<u>Units</u>
<u>Well Water</u>					
2	Gross Beta	2.7	3.2±0.7	3.7	pCi/l
2	H-3		all <200		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
<u>Fish</u>					
7	Gross Beta	1.6	2.4±0.4	2.8	pCi/g wet
7	Mn-54		all <0.13		pCi/g wet
7	Fe-59		all <0.26		pCi/g wet
7	Co-58		all <0.13		pCi/g wet
7	Co-60		all <0.13		pCi/g wet
7	Zn-65		all <0.26		pCi/g wet
7	Cs-134		all <0.13		pCi/g wet
7	Cs-137	0.040	0.086±0.033	0.110	pCi/g wet
7	Other Gamma Emitters		all <0.5		pCi/g wet
<u>Soil</u>					
8	Gross Beta	11.2	21.1±4.7	25.9	pCi/g dry
8	Cs-137	0.24	0.43±0.16	0.64	pCi/g dry
8	Other Gamma Emitters		all <0.15		pCi/g dry
<u>Shoreline Sediment</u>					
5	Gross Beta	4.4	7.1±2.1	9.1	pCi/g dry
5	Cs-137	0.04	0.07±0.02	0.10	pCi/g dry
5	Other Gamma Emitters		all <0.15		pCi/g dry
<u>Vegetation</u>					
8	Gross Beta	2.8	5.6±1.9	10.8	pCi/g wet
8	Cs-137		all <0.08		pCi/g wet
8	Cs-134		all <0.06		pCi/g wet
8	I-131		all <0.06		pCi/g wet
8	Other Gamma Emitters		all <0.25		pCi/g wet
<u>Algae</u>					
4	Gross Beta	1.8	3.1±1.2	4.2	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	<0.02	<0.03±0.02	0.05	pCi/g wet
4	Other Gamma Emitters		all <0.25		pCi/g wet

6.0 NONRADIOACTIVE CHEMICAL RELEASES

6.1 Scheduled Chemical Waste Releases*

Scheduled chemical waste releases to the circulating water system from July 1, 1991, to December 31, 1991, included 5.92E+06 gallons of neutralized wastewater. The wastewater contained 8.33E+02 pounds of suspended solids and 4.33E+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, 1991, to December 31, 1991, included 1.58E+07 gallons of clarified wastewater. The wastewater contained 2.57E+03 pounds of suspended solids.

*Miscellaneous chemical waste released directly to the circulating water, based on amount of chemicals used for July 1, 1991, to December 31, 1991, included 1.89E+04 pounds of sodium bisulfite and 1.14E+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.

TABLE 7-1

CIRCULATING WATER SYSTEM OPERATION
July 1, 1991 to December 31, 1991

		<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
Average Volume Cooling Water Discharge	U1	554.4	554.4	555.3	571.7	418.6	307.9
(Million gal/day)**	U2	554.4	554.4	545.8*	0.0*	343.0*	307.9
Average Cooling Water Intake Temperature	U1	58.8	64.3	55.2	46.1	36.6	37.1
(Degrees F)	U2	58.9	64.3	55.9	----*	38.9*	37.1
Average Cooling Water Discharge Temperature	U1	77.3	82.9	73.6	63.2	60.2	67.0
(Degrees F)	U2	79.8	85.2	75.7	----*	65.7*	68.6
Average Ambient Lake Temperature							
(Degrees F)		59.0	63.5	54.0	46.0	38.5	35.5

(*Unit 2 refueling shutdown from September 28, 1991 to November 12, 1991)

(**For days with cooling water discharge flow)

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 $<0.005 \mu\text{Ci}$.

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 either the ODCM, the Environmental manual, or the PCP during this reporting period.

9.2 Interlaboratory Comparison Program

The analytical laboratory contracted to perform the radioanalyses of the 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

Sample types, sampling locations, and collection frequencies complied with Technical Specification 15.7.7.A during this reporting period.

The Technical Specification 15.7.7.A.1 recognizes that certain samples may be missed due to hazardous conditions and other legitimate circumstances. During January of 1991, ice buildup along the shoreline of Lake Michigan at location E-05 prevented the collection of water at this site. In the fourth quarter of 1991, the TLD at location E-02 was moved when the "Energy Center" sign to which it was attached was transplanted from the Site Boundary Control Center on Nuclear Road to the Energy Information Center near the Plant. Health Physics was not notified of the move. The TLD remained at the new location for one month before it was found. This TLD was not analyzed for the REMP.

9.4 Summary of Unachievable Specified Environmental LLDs

All LLDs listed in Table 15.7.7-2 of the PBNP Technical Specifications achieved were during this sampling period.

9.5 Special Circumstances

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

WISCONSIN ELECTRIC

POWER COMPANY

POINT BEACH NUCLEAR PLANT

UNIT NOS. 1 AND 2

SEMIANNUAL
MONITORING REPORT

JULY, 1991 through DECEMBER, 1991

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 for the period of July 1, 1991, through December 31, 1991, 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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SEMIANNUAL MONITORING REPORT
July 1, 1991 to December 31, 1991

1.0 RADIOACTIVE LIQUID RELEASES

The total radioactive liquid release, excluding tritium for this reporting period, was $4.78\text{E-}02$ curies. This included $2.55\text{E-}02$ curies in processed radioactive waste and primary coolant system letdown, $3.60\text{E-}04$ curies in Unit 1 steam generator blowdown, $2.20\text{E-}02$ curies in Unit 2 steam generator blowdown and $<\text{MDA}$ curies in retention pond effluent.

The total tritium release for this reporting period was $4.08\text{E+}02$ curies. This included $4.07\text{E+}02$ curies in processed radioactive waste and primary coolant system letdown, $4.49\text{E-}02$ curies in Unit 1 steam generator blowdown, $8.76\text{E-}01$ curies in Unit 2 steam generator blowdown and $7.81\text{E-}02$ curies in retention pond effluent.

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, 1991, through June 30, 1991.

	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>6-MONTH TOTAL</u>
Total Activity Released (Ci)				
Gross Alpha	$4.56\text{E-}06$	$3.64\text{E-}05$	$5.08\text{E-}06$	$4.61\text{E-}05$
Strontium	$6.52\text{E-}07$	$1.38\text{E-}05$	$4.34\text{E-}07$	$4.62\text{E-}05$
Average Diluted Discharge Concentration ($\mu\text{Ci/cc}$)				
Gross Alpha	$7.10\text{E-}14$	$5.54\text{E-}13$	$8.06\text{E-}14$	
Strontium	$1.02\text{E-}14$	$2.10\text{E-}13$	$6.89\text{E-}15$	

TABLE 1-1

COMPOSITION OF CIRCULATING WATER DISCHARGE
JULY 1, 1991 THROUGH DECEMBER 31, 1991

	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Total Activity Released (Ci)							
Gamma Scan	1.81E-03	2.73E-02	2.63E-03	2.24E-05	6.07E-03	9.67E-03	4.75E-02
Gross Alpha	<MDA	1.55E-05	4.72E-06	<MDA	(1)	(1)	(1)
Tritium	9.09E+01	1.26E+02	4.15E+01	1.67E+01	7.04E+01	6.27E+01	4.08E+02
Strontium	9.08E-04	3.11E-04	1.46E-05	1.16E-05	(1)	(1)	(1)
Total Volumes Released (Gal)							
Processed Waste	1.16E+05	2.24E+05	1.23E+05	9.12E+04	1.69E+05	1.14E+05	8.37E+05
(U1) Steam Generator Blowdown	3.53E+06	3.51E+06	3.46E+06	3.50E+06	3.54E+06	3.62E+06	2.12E+07
(U2) Steam Generator Blowdown	3.41E+06	3.62E+06	3.18E+06	<MDA	2.43E+06	3.69E+06	1.63E+07
Retention Pond	2.51E+06	2.69E+06	1.92E+06	2.45E+06	2.64E+06	3.58E+06	1.58E+07
Total	9.57E+06	1.00E+07	8.68E+06	6.04E+06	8.78E+06	1.10E+07	5.41E+07
Volume of Dilution Water (Gal)							
	1.72E+10	1.72E+10	1.67E+10	1.77E+10	1.26E+10	8.75E+09	9.02E+10
Average Diluted Discharge Concentration (uCi/cc)							
Gross Gamma	2.84E-11	4.25E-10	4.69E-11	3.34E-13	1.29E-10	2.99E-10	
Gross Alpha	<MDA	2.38E-13	7.48E-14	<MDA	(1)	(1)	
Tritium	1.40E-06	1.93E-06	6.58E-07	2.48E-07	1.48E-06	1.89E-06	
Strontium	1.39E-13	4.78E-12	2.30E-13	5.40E-05	(1)	(1)	
Maximum Discharge Concentration During Release Period (uCi/cc)							
Gross Gamma	1.51E-10	4.99E-09	2.62E-10	4.80E-11	2.23E-10	1.28E-09	
Tritium	7.66E-05	3.82E-05	4.23E-05	4.71E-05	9.54E-05	7.07E-05	
Total Equivalent Curies Released							
Co-60 Equivalent Curies	1.96E-05	1.15E-01	3.17E-03	7.69E-05	4.88E-02	9.00E-03	1.76E-01
% Annual RETS Limit	2.07E-05	1.21E-01	3.35E-03	8.12E-05	5.15E-02	9.50E-03	1.86E-01
I-131 Equivalent Curies	3.91E-04	5.16E-04	5.28E-04	<MDA	3.83E-04	1.99E-03	3.81E-03
% Annual RETS Limit	1.49E-03	1.97E-03	2.02E-03	<MDA	1.46E-03	7.60E-03	1.45E-02
Tritium Equivalent Curies	9.09E+01	1.26E+02	4.15E+01	1.67E+01	7.04E+01	6.27E+01	4.08E+02
% Annual RETS Limit	4.71E-01	6.53E-01	2.15E-01	8.65E-02	3.65E-01	3.25E-01	2.12E+00

(1) Information unavailable at time of report preparation.

Note: Dissolved noble gases detected in liquid effluents are included in airborne release totals
RETS = Radiological Effluent Technical Specifications.

TABLE 1-2

ISOTOPIC COMPOSITION OF CIRCULATING WATER DISCHARGES
JULY 1, 1991 THROUGH DECEMBER 31, 1991

NUCLIDES RELEASED	JUL (Curies)	AUG (Curies)	SEP (Curies)	OCT (Curies)	NOV (Curies)	DEC (Curies)	TOTAL (Curies)
Tritium	9.09E+01	1.26E+02	4.15E+01	1.67E+01	7.04E+01	6.27E+01	4.08E+02
I-131	<MDA	7.77E-05	9.86E-05	<MDA	9.71E-05	1.18E-03	1.45E-03
I-132	<MDA	<MDA	9.50E-05	<MDA	<MDA	6.67E-04	7.62E-04
I-133	1.77E-03	1.99E-03	1.92E-03	<MDA	1.29E-03	3.11E-03	1.01E-02
I-134	<MDA	<MDA	<MDA	<MDA	<MDA	6.83E-04	6.83E-04
I-135	<MDA	<MDA	<MDA	<MDA	<MDA	4.78E-04	4.78E-04
F-18	<MDA	<MDA	2.92E-04	<MDA	9.42E-04	3.04E-03	4.27E-03
Ag-110m	1.92E-05	2.65E-04	<MDA	4.10E-06	3.63E-06	<MDA	2.92E-04
Co-58	<MDA	2.89E-03	<MDA	2.44E-06	1.81E-05	<MDA	2.91E-03
Co-60	1.92E-05	4.23E-03	1.19E-05	8.31E-06	1.14E-03	<MDA	5.41E-03
Cs-134	<MDA	5.34E-04	<MDA	<MDA	8.32E-04	1.22E-04	1.49E-03
Cs-137	<MDA	6.30E-03	2.09E-04	4.48E-06	1.74E-03	3.87E-04	8.64E-03
Mn-54	<MDA	1.96E-04	<MDA	<MDA	<MDA	<MDA	1.96E-04
Sb-125	<MDA	1.08E-02	<MDA	<MDA	<MDA	<MDA	1.08E-02
Sn-113	<MDA	<MDA	<MDA	3.07E-06	<MDA	<MDA	3.07E-06
Sr-89	8.60E-06	2.44E-04	<MDA	6.90E-07	(1)	(1)	(1)
Sr-90	4.83E-07	6.66E-05	1.46E-05	1.09E-05	(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.

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, 1991, through June 30, 1991.

	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>6-MONTH TOTAL</u>
Sr-89 (Ci)	<MDA	1.33E-05	4.34E-07	1.52E-05
Sr-90 (Ci)	6.52E-07	5.40E-07	<MDA	3.11E-05

1.3 Subsoil Drain System Releases of Tritium

1.3.1 Releases During Current Reporting Period

The releases 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, 1991 through December 31, 1991

<u>Third Quarter</u>	<u>S-1</u>	<u>S-3</u>	<u>S-9</u>	<u>S-10</u>	<u>Totals</u>
H-3 ($\mu\text{Ci/cc}$)	<MDA	<MDA	No Sample	<MDA	
Ave. Flow (gpd)	4.78E+03	2.03E+03	No Flow	8.47E+03	
<u>Fourth Quarter</u>					
H-3 ($\mu\text{Ci/cc}$)	<MDA	<MDA	No Sample	<MDA	
Ave. Flow (gpd)	6.42E+03	1.63E+03	No Flow	1.25E+04	
<u>Semiannual Totals</u>					
Total Released (Ci)	<MDA	<MDA	No Sample	<MDA	<MDA
Total Flow (gals)	1.03E+06	3.37E+05	No Flow	1.93E+06	3.30E+06

1.4 Land Application of Sewage Sludge

Trace amounts of radionuclides may be land-applied with sewage sludges on various Department of Natural Resources approved Wisconsin Electric Power Company properties surrounding the Point Beach Nuclear Plant in accordance with approved methodologies pursuant to 10 CFR 20.302. The amounts discharged in the sewage during this reporting period are presented in Table 1-4.

TABLE 1-4

SEWAGE SLUDGE LAND APPLICATIONS
July 1, 1991 through December 31, 1991

<u>Date of Application</u>	<u>Gallons</u>	<u>Site</u>	<u>Activity Released (Ci)</u>
September 28, 1991	23,100	PB-02	Cs-137 2.51E-06 Co-60 3.68E-06

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 ten gas decay tank releases during this reporting period.

2.1 Radioactive Airborne Release Summary

2.1.1 Release During Current Reporting Period

Radioactivity released in airborne effluent 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, 1991 through June 30, 1991.

	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>6-MONTH TOTAL</u>
Strontium (Ci)	<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.

TABLE 2-1

RADIOACTIVE AIRBORNE RELEASE SUMMARY
JULY 1, 1991 THROUGH DECEMBER 31, 1991

	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>TOTAL</u>
Total Noble Gases (Ci): (2)	5.60E-01	3.35E-01	4.09E-01	1.34E+01	6.15E-01	2.11E+00	1.74E+01
Total Radioiodines (Ci):	1.82E-06	5.30E-06	8.28E-06	1.53E-04	1.31E-04	1.47E-04	4.46E-04
Total Particulates (Ci):	1.23E-03	3.14E-04	2.92E-04	4.67E-04	1.82E-01	2.87E-04	1.85E-01
Alpha (Ci):	3.99E-07	5.15E-07	4.59E-09	7.39E-07	7.00E-07	3.24E-06	5.60E-06
Strontium (Ci):	<MDA	<MDA	<MDA	(1)	(1)	(1)	(1)
All Others (Ci):	1.23E-03	3.13E-04	2.92E-04	4.66E-04	1.82E-01	2.84E-04	1.85E-01
Total Tritium (Ci):	1.07E+01	9.53E+00	5.65E+00	2.32E+01	7.74E+00	9.60E+00	6.64E+01
Maximum Hourly Average Release Rate (3) (Curies/Second)	6.71E-04	8.52E-06	1.75E-04	8.77E-04	8.71E-06	9.54E-05	
Total Equivalent Curies Released							
Co-60 Equivalent Curies	2.52E-05	2.52E-06	3.55E-06	4.07E-05	3.67E-02	3.15E-04	3.71E-02
% Annual RETS Limit	1.47E-03	1.47E-04	2.06E-04	2.37E-03	2.13E+00	1.83E-02	2.16E+00
I-131 Equivalent Curies	1.59E-06	2.08E-06	4.03E-06	1.54E-04	1.01E-04	9.44E-05	3.57E-04
% Annual RETS Limit	4.52E-04	5.91E-04	1.14E-03	4.38E-02	2.87E-02	2.68E-02	1.01E-01
Xe-133 Equivalent Curies (2)	8.86E+00	4.29E+00	4.31E+00	3.23E+01	4.30E+00	5.86E+00	5.99E+01
% Annual RETS Limit	8.52E-04	4.13E-04	4.14E-04	3.11E-03	4.13E-04	5.63E-04	5.76E-03
Tritium Equivalent Curies	1.07E+01	9.53E+00	5.65E+00	2.32E+01	7.74E+00	9.60E+00	6.64E+01
% Annual PETS Limit	3.69E-02	3.29E-02	1.95E-02	8.00E-02	2.67E-02	3.31E-02	2.29E-01

(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

RADIOACTIVE AIRBORNE RELEASE SUMMARY
JULY 1, 1991 THROUGH DECEMBER 31, 1991

NUCLIDES RELEASED	JUL (Curies)	AUG (Curies)	SEP (Curies)	OCT (Curies)	NOV (Curies)	DEC (Curies)	TOTAL (Curies)
Tritium	1.07E+01	9.53E+00	5.65E+00	2.32E+01	7.74E+00	9.60E+00	6.64E+01
Xe-133	2.07E-01	1.69E-01	2.51E-01	1.25E+01	4.35E-01	1.88E+00	1.54E+01
Kr-85m	9.33E-03	3.24E-03	1.97E-03	2.32E-02	1.19E-03	3.21E-03	4.21E-02
Kr-88	2.33E-02	7.38E-03	4.73E-03	5.93E-02	2.69E-03	7.30E-03	1.05E-01
Xe-133m	1.81E-04	2.49E-04	1.24E-03	8.12E-03	1.09E-02	1.21E-02	3.28E-02
Xe-135	5.38E-02	2.67E-02	1.41E-02	1.17E-01	2.57E-02	1.83E-02	2.56E-01
Xe-138	1.03E-01	3.08E-02	2.02E-02	2.88E-01	9.45E-03	2.30E-02	4.74E-01
Kr-87	2.16E-02	6.64E-03	4.27E-03	5.86E-02	2.18E-03	5.79E-03	9.91E-02
Xe-135m	3.49E-02	1.11E-02	7.05E-03	9.29E-02	3.64E-03	8.79E-03	1.58E-01
Ar-41	1.07E-01	7.96E-02	9.85E-02	1.72E-01	1.06E-01	8.57E-02	6.49E-01
Kr-85	<MDA	<MDA	5.77E-03	7.91E-02	1.81E-02	6.28E-02	1.66E-01
I-131	1.57E-06	1.07E-06	2.70E-06	1.54E-04	9.15E-05	8.40E-05	3.35E-04
I-132	<MDA	<MDA	<MDA	<MDA	<MDA	7.20E-06	7.20E-06
I-133	3.06E-07	4.23E-06	5.57E-06	4.09E-07	3.91E-05	4.03E-05	8.99E-05
I-135	<MDA	<MDA	<MDA	<MDA	<MDA	1.58E-05	1.58E-05
F-18	1.99E-04	<MDA	<MDA	4.54E-04	<MDA	4.70E-06	6.58E-04
Ba-139	1.17E-07	<MDA	<MDA	<MDA	<MDA	<MDA	1.17E-07
Ce-144	<MDA	3.94E-09	<MDA	<MDA	<MDA	<MDA	3.94E-09
Cr-51	<MDA	7.58E-09	<MDA	<MDA	<MDA	<MDA	7.58E-09
Cs-134	<MDA	<MDA	<MDA	<MDA	1.09E-03	1.29E-05	1.10E-03
Cs-137	<MDA	<MDA	1.13E-07	1.76E-07	1.89E-03	1.28E-05	1.90E-03
Cs-138	3.22E-04	1.05E-04	8.39E-05	3.62E-06	1.86E-02	1.12E-04	1.92E-02
Co-57	<MDA	<MDA	<MDA	<MDA	<MDA	4.80E-07	4.80E-07
Co-58	<MDA	<MDA	<MDA	3.24E-07	<MDA	<MDA	3.24E-07
Co-60	<MDA	<MDA	<MDA	<MDA	8.34E-05	<MDA	8.34E-05
Fe-59	<MDA	<MDA	4.87E-09	<MDA	<MDA	<MDA	4.87E-09
Rb-88	7.09E-04	2.08E-04	2.08E-04	8.33E-06	1.61E-01	1.41E-04	1.62E-01
Nb-97	<MDA	<MDA	<MDA	<MDA	<MDA	1.65E-09	1.65E-09
Te-132	5.68E-08	1.19E-08	1.29E-08	1.12E-09	2.25E-06	7.62E-09	2.34E-06
Sr-89	<MDA	<MDA	<MDA	(1)	(1)	(1)	(1)
Sr-90	<MDA	<MDA	<MDA	(1)	(1)	(1)	(1)
Alpha	3.99E-07	5.15E-07	4.59E-09	7.39E-07	7.00E-07	3.24E-06	5.60E-06

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

2.2.2 Additions to Previous Semiannual Monitoring Report

The following information was not available at the time of previous report preparation and should be added to Table 2-2 of the Semiannual Monitoring Report, covering the period January 1, 1991, through June 30, 1991.

	APR	MAY	JUN	6-MONTH TOTAL
Sr-89 (Ci)	<MDA	<MDA	<MDA	<MDA
Sr-90 (Ci)	<MDA	<MDA	<MDA	<MDA

3.0 RADIOACTIVE SOLID WASTE SHIPMENTS

Solid wastes shipped for burial during this reporting period were as follows:

DATE OF SHIPMENT TO BURIAL	VOLUME (CUBIC FEET)	TOTAL ACTIVITY (Curies)	BURIAL SITE
08/02/91	300.9 (1)	5.93E-01	Barnwell SC
08/07/91	14.7 (1)	2.00E-03	Barnwell SC
08/13/91	288.9 (1)	1.15E-01	Barnwell SC
08/26/91	30.0 (1)	4.00E-04	Hanford WA
10/07/91	360.2 (2)	1.38E+00	Barnwell SC
10/04/91	7.1 (3)	2.00E-03	Barnwell SC
10/04/91	28.4 (3)	7.00E-03	Barnwell SC
10/11/91	29.6 (3)	8.00E-03	Barnwell SC
10/18/91	22.5 (3)	5.00E-03	Barnwell SC
11/12/91	127.5 (3)	2.00E-01	Barnwell SC
12/08/91	14.8 (3)	6.00E-03	Barnwell SC
12/08/91	3.1 (3)	6.00E-03	Barnwell SC
11/22/91	21.0 (3)	4.50E-02	Barnwell SC
11/25/91	66.6 (3)	2.80E-02	Barnwell SC
11/21/91	619.9 (1)	1.32E+00	Barnwell SC
11/25/91	37.6 (1)	3.50E-02	Barnwell SC
12/02/91	15.0 (1)	3.00E-03	Hanford WA
TOTAL	1987.8	3.76E+00	

- (1) Dry Active Waste
- (2) Evaporator Concentrates
- (3) Scrap Metal

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 2. The new fuel assemblies received for Unit 2 were used for the Fall 1991 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, 1991 through December 31, 1991 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. However, above normal H-3 concentrations were found in Lake Michigan water samples obtained north of PBNP. Because the concentrations increase away from PBNP, the elevated H-3 concentrations are not the result of PBNP operations. Low levels of Sr-90 and Cs-137, resulting from Chernobyl and atmospheric weapons tests, still persist in milk (Sr-90) as well as in fish, sediment, algae, and soil (Cs-137) samples. All TLD results were within the normal range for the third and fourth quarters of 1991.

In July, visual verification of animals grazing in vicinity of the PBNP site boundary, pursuant to Technical Specification 15.7.7.D, determined that the milk sampling program remains as conservative as practicable.

<u>No.</u>	<u>Sample Type</u>	<u>Low</u>	<u>Average</u>	<u>High</u>	<u>Units</u>
<u>TLDS</u>					
43	Environmental Radiation	0.68	1.00±0.16	1.30	mR/7days
<u>Air</u>					
156	Gross beta	0.011	0.025±0.009	0.046	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
<u>Milk</u>					
18	Radioiodine		all <0.5		pCi/l
18	Sr-89		all <1		pCi/l
18	Sr-90	0.9	1.5±0.5	3.0	pCi/l
18	Cs-137		all <5		pCi/l
18	Cs-134		all <5		pCi/l
18	Ba-La-140		all <5.2		pCi/l
18	Other Gamma Emitters		all <5		pCi/l
<u>Lake Water</u>					
30	Gross Beta	1.8	2.8±0.6	4.0	pCi/l
10	Tritium	<182	<272±143	600	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