



Commonwealth Edison
Braidwood Nuclear Power Station
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August 23, 1989
BW/89-937

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

SUBJECT: Braidwood Station Operating Report, NRC Dockets
STN 50-456 and STN 50-457

To Whom It May Concern:

Enclosed is the Radioactive Effluent Report for January through June,
1989, for Braidwood Nuclear Station.

One copy of this report will be furnished to the NRC Resident Inspector.

Sincerely,

R. E. Querio
Station Manager
Braidwood Nuclear Station

REQ/RK/kdf

enclosure

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BRAIDWOOD NUCLEAR POWER STATION

SEMIANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE, 1989

- A. Pursuant to Technical Specification 6.9.1.7, the following is an explanation as to why the inoperability of liquid or gaseous effluent monitoring instrumentation was not corrected within the time specified in Technical Specifications:
1. Condensate Polisher Sump Discharge Monitor (OPR41J) was inoperable greater than 30 days. The monitor was inoperable while repairs were being made to eliminate an electrical noise problem that caused the monitor to spike. During the period in question, a design change was implemented to incorporate a check valve that would prevent backflow into the monitor.
- B. There were no major changes to the liquid, gaseous, or solid Radwaste Treatment Systems. There were no liquid holdup tanks or gas decay tanks which exceeded the limits addressed in the Technical Specifications.
- C. There were no revisions to the Braidwood Station Process Control Program.
- D. The Station experienced a monitored, unplanned release of noble gases from the waste gas decay system during the first half of 1989. The curie content and release rate of the noble gases released are being compiled and will be provided in an errata to the Semi-Annual Report.
- E. A procedure is being developed to quantify continuous releases of noble gases from the vent stacks. The procedure, when implemented, will provide a means for differentiating batch from continuous gaseous effluent releases.
- F. LLD values are being generated for each isotope listed in the Semi-Annual Report and will be presented in an errata.

BRAIDWOOD NUCLEAR POWER STATION
 SEMIANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES
 UNIT 1

	UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUN	2nd QUARTER
A. Fission and Activation Gas Releases									
1. Total Release Activity (LLD = **)	Ci	4.70E+0	1.20E+1	2.49E-1	1.69E+1	2.70E+0	2.16E+0	8.47E-1	5.80E+0
2. Maximum Release Rate	uCi/sec	2.35+2	8.37E+2	9.91E+0	8.37E+2	3.23E+2	1.85E+2	2.54E+2	3.23E+2
3. % of 10CFR20 Limits*									
a. Whole Body (500 mrem/year)	%	0.00	0.01	0.00	0.01	0.00	0.02	0.00	0.00
b. Skin (3000 mrem/year)	%	0.01	0.02	0.00	0.02	0.01	0.01	0.01	0.01
4. % of 10CFR50 Limits									
a. Gamma Quarterly (5 mrad)	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
b. Beta Quarterly (10 mrad)	%	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
c. Gamma Annual (10 mrad)	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d. Beta Annual (20 mrad)	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

B. Iodine Releases

1. Total I-131 and I-133 Activity (LLD = **)	Ci	2.62E-5	7.23E-7	2.89E-6	2.98E-5	5.95E-6	1.18E-4	6.52E-5	1.89E-4
2. % of 10CFR20/10CFR50 Limits+									

* % of 10CFR20 limits is based on the maximum release rate for the period considered.

+ Iodine, particulate, and tritium limits are expressed as a total limit. See Step E.

** LLD reflects LLDs for individual isotopes included in calculation.

BRAIDWOOD NUCLEAR POWER STATION
 SEMINANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES
 UNIT 1

	UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUN	2nd QUARTER
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C. Particulate (> 8 day half-life) Releases

1. Gross Activity (LLD = *)	Ci	< LLD	2.06E-7	6.26E-6	6.47E-6	1.76E-6	2.80E-6	< LLD	4.56E-6
2. Gross Alpha Activity (LLD=1.17E-18 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
3. % of 10CFR20/10CFR50 Limits+									

D. Tritium Releases

1. Total Release Activity (LLD = **)	Ci	7.32E-2	4.73E-2	3.73E+0	3.85E+0	2.50E+0	2.64E-1	5.61E-1	3.33E+0
2. % of 10CFR20/10CFR50 Limits+									

E. Sum of Iodine, Particulate (> 8 day half-life), and Tritium Releases

1. Total Activity (LLD = *)	Ci	7.32E-2	4.73E-2	3.73E+0	3.85E+0	2.50E+0	2.64E-1	5.61E-1	3.33E+0
2. % of 10CFR20 Limit									
a. Any Organ (1500 mrem/year)	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. % of 10CFR50 Limit									
a. Quarterly Any Organ (7.5 mrem)	%	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.02
b. Annual Any Organ (15.0 mrem)	%	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.01

+ Iodine, particulate, and tritium limits are expressed as a total limit. See Step E.

* LLD reflects LLDs for individual isotopes included in calculation.

** LLD for this isotope is being developed and will be presented in an errata to the Semi-Annual Report.

BRAIDWOOD NUCLEAR POWER STATION
 SEMIANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
 GASEOUS EFFLUENTS - VENT STACK RELEASES
 UNIT 1

	UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUN	2nd QUARTER
F. Fission and Activation Gas Releases									
Xe-131m (LLD = *)	Ci	6.93E-2	1.10E-1	1.91E-3	1.81E-1	4.17E-2	2.44E-2	1.16E-2	7.77E-2
Xe-133m (LLD = 2.62E-12 Ci/ml)	Ci	3.37E-2	7.80E-2	< LLD	1.12E-1	2.10E-2	6.37E-3	2.55E-3	2.99E-2
Xe-135m (LLD = *)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Xe-133 (LLD = 9.26E-13 Ci/ml)	Ci	4.50E+0	1.15E+1	2.12E-1	1.62E+1	2.70E+0	2.11E+0	7.96E-1	5.61E+0
Xe-135 (LLD = 3.48E-13 Ci/ml)	Ci	4.82E-2	2.16E-1	3.68E-3	2.68E-1	4.35E-3	3.43E-3	1.46E-3	9.24E-3
Kr-85m (LLD = *)	Ci	2.18E-3	3.26E-3	< LLD	5.44E-3	< LLD	< LLD	< LLD	< LLD
Kr-85 (LLD = *)	Ci	2.96E-2	1.00E-1	< LLD	1.30E-1	< LLD	1.63E-2	< LLD	1.63E-2
Kr-87 (LLD = 6.95E-13 Ci/ml)	Ci	1.37E-4	< LLD	< LLD	1.37E-4	< LLD	< LLD	< LLD	< LLD
Kr-88 (LLD = 1.11E-12 Ci/ml)	Ci	2.01E-4	5.40E-4	< LLD	7.41E-4	< LLD	< LLD	< LLD	< LLD
Ar-41 (LLD = *)	Ci	1.96E-2	9.26E-3	3.10E-2	5.99E-2	1.86E-2	2.95E-3	3.55E-2	5.71E-2
Xe-138 (LLD = 1.52E-12 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Others (Specify)									

G. Iodine Releases

I-131 (LLD = 4.90E-19 Ci/ml)	Ci	2.56E-5	7.23E-7	2.89E-6	2.92E-5	5.95E-6	7.33E-5	5.23E-5	1.32E-4
I-132 (LLD = *)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
I-133 (LLD = 5.04E-19 Ci/ml)	Ci	5.52E-7	< LLD	< LLD	5.52E-7	< LLD	4.47E-5	1.29E-5	5.76E-5
I-134 (LLD = *)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
I-135 (LLD = *)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Others (Specify)									

* LLD for this isotope is being developed and will be presented in an errata to the Semi-Annual Report.

BRAIDWOOD NUCLEAR POWER STATION
 SEMIANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
 GASEOUS EFFLUENTS - VENT STACK RELEASES
 UNIT 1

	UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUNE	2nd QUARTER
H. Particulate (> 8 day half-life) Releases									
Mn-54 (LLD = 2.99E-19 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Fe-55 (LLD = **)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Fe-59 (LLD = 1.37E-18 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Co-58 (LLD = 3.31E-19 Ci/ml)	Ci	< LLD	2.06E-7	6.26E-6	6.47E-6	1.76E-6	2.80E-6	< LLD	4.56E-6
Co-60 (LLD = 6.12E-19 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Sr-89 (LLD = 1.4E-10 Ci/ml)	Ci	---	---	---	< LLD	---	---	---	*
Sr-90 (LLD = 4.7E-11 Ci/ml)	Ci	---	---	---	< LLD	---	---	---	*
Y-88 (LLD = **)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Ru-103 (LLD = **)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Ag-110m (LLD = **)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Cs-134 (LLD = 5.20E-19 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Cs-136 (LLD = 3.72E-19 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Cs-137 (LLD = 3.84E-19 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Ba/La-140 (LLD = 1.06E-18 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Ce-144 (LLD = 2.56E-18 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Others (Specify)									

* Waiting for analysis results - Data will be presented in an errata to the Semi-Annual Report.

** LLD for this isotope is being developed and will be presented in an errata to the Semi-Annual Report.

BRAIDWOOD NUCLEAR POWER STATION
 SEMIANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES
 UNIT 2

	UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUN	2nd QUARTER
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A. Fission and Activation Gas Releases

1. Total Release Activity (LLD = **)	Ci	3.14E+0	9.10E+1	1.47E-2	9.42E+1	4.29E+0	6.81E+0	3.77E+0	1.49E+1
2. Maximum Release Rate	uCi/sec	1.12E+2	8.37E+2	1.41E+0	8.37E+2	3.23E+2	9.74E+2	2.54E+2	9.47E+2
3. % of 10CFR20 Limits*									
a. Whole Body (500 mrem/year)	%	0.00	0.01	0.00	0.01	0.00	0.02	0.00	0.02
b. Skin (3000 mrem/year)	%	0.00	0.02	0.00	0.02	0.01	0.02	0.01	0.04
4. % of 10CFR50 Limits									
a. Gamma Quarterly (5 mrad)	%	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
b. Beta Quarterly (10 mrad)	%	0.00	0.04	0.00	0.04	0.00	0.00	0.01	0.01
c. Gamma Annual (10 mrad)	%	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
d. Beta Annual (20 mrad)	%	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00

B. Iodine Releases

1. Total I-131 and I-133 Activity (LLD = **)	Ci	3.78E-5	1.15E-4	4.24E-6	1.57E-4	2.51E-6	2.44E-6	9.10E-6	1.41E-5
2. % of 10CFR20/10CFR50 Limits+									

- * % of 10CFR20 limits is based on the maximum release rate for the period considered.
- + Iodine, particulate, and tritium limits are expressed as a total limit. See Step E.

** LLD reflects LLDs for individual isotopes included in calculations.

BRAIDWOOD NUCLEAR POWER STATION
 SEMINANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES
 UNIT 2

	UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUN	2nd QUARTER
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C. Particulate (> 8 day half-life) Releases

1. Gross Activity (LLD = *)	Ci	< LLD	8.25E-6	< LLD	8.25E-6	< LLD	2.34E-7	< LLD	2.34E-7
2. Gross Alpha Activity (LLD=1.17E-18 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	2.82E-7	< LLD	< LLD	2.82E-7
3. % of 10CFR20/10CFR50 Limits+									

D. Tritium Releases

1. Total Release Activity (LLD = **)	Ci	5.73E-3	8.50E-1	8.31E-2	9.39E-1	1.03E-1	4.28E-2	6.15E-1	7.61E-1
2. % of 10CFR20/10CFR50 Limits+									

E. Sum of Iodine, Particulate (> 8 day half-life), and Tritium Releases

1. Total Activity (LLD = *)	Ci	5.77E-3	8.50E-1	8.31E-2	9.39E-1	1.03E-1	4.28E-2	6.15E-1	7.61E-1
2. % of 10CFR20 Limit									
a. Any Organ (1500 mrem/year)	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. % of 10CFR50 Limit									
a. Quarterly Any Organ (7.5 mrem)	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
b. Annual Any Organ (15.0 mrem)	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

+ Iodine, particulate, and tritium limits are expressed as a total limit. See Step E.

* LLD reflects LLDs for individual isotopes included in calculation.

** LLD for this isotope is being developed and will be presented in an errata to the Semi-Annual Report.

BRAIDWOOD NUCLEAR POWER STATION
SEMIANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
GASEOUS EFFLUENTS - VENT STACK RELEASES
UNIT 2

	UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUN	2nd QUARTER
F. Fission and Activation Gas Releases									
Xe-131m (LLD = *)	Ci	6.58E-2	3.09E-1	< LLD	3.75E-1	7.30E-2	1.42E-1	8.23E-2	2.97E-1
Xe-133m (LLD = 2.62E-12 Ci/ml)	Ci	1.08E-2	1.60E-1	< LLD	1.71E-1	3.53E-2	2.69E-2	1.62E-2	7.84E-2
Xe-135m (LLD = *)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Xe-133 (LLD = 9.26E-13 Ci/ml)	Ci	2.99E+0	9.02E+1	1.04E-2	9.32E+1	4.13E+0	6.59E+0	3.63E+0	1.44E+1
Xe-135 (LLD = 3.48E-13 Ci/ml)	Ci	1.69E-3	1.46E-1	1.41E-3	1.49E-1	8.72E-3	4.96E-3	2.94E-3	1.66E-2
Kr-85m (LLD = *)	Ci	< LLD	3.26E-3	6.71E-5	3.33E-3	< LLD	< LLD	< LLD	< LLD
Kr-85 (LLD = *)	Ci	1.33E-2	1.00E-1	< LLD	1.13E-1	< LLD	1.63E-2	< LLD	1.63E-2
Kr-87 (LLD = 6.95E-13 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Kr-88 (LLD = 1.11E-12 Ci/ml)	Ci	< LLD	5.40E-4	< LLD	5.40E-4	< LLD	< LLD	< LLD	< LLD
Ar-41 (LLD = *)	Ci	5.85E-2	6.75E-2	2.84E-3	1.29E-1	4.62E-2	3.16E-2	3.55E-2	1.13E-1
Xe-138 (LLD = 1.52E-12 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Others (Specify)									

G. Iodine Releases

I-131 (LLD = 4.90E-19 Ci/ml)	Ci	3.78E-5	1.15E-4	4.24E-6	1.57E-4	1.50E-6	1.67E-6	9.10E-6	1.23E-5
I-132 (LLD = *)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
I-133 (LLD = 5.04E-19 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	1.01E-6	7.69E-7	< LLD	1.78E-6
I-134 (LLD = *)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
I-135 (LLD = *)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Others (Specify)									

* LLD for this isotope is being developed and will be presented in an errata to the Semi-Annual Report.

BRAIDWOOD NUCLEAR POWER STATION
 SEMIANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
 GASEOUS EFFLUENTS - VENT STACK RELEASES
 UNIT 2

	UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUN	2nd QUARTER
H. Particulate (> 8 day half-life) Releases									
Mn-54 (LLD = 2.99E-19Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Fe-55 (LLD = **)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Fe-59 (LLD = 1.37E-18 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Co-58 (LLD = 3.31E-19 Ci/ml)	Ci	< LLD	8.25E-6	< LLD	8.25E-6	< LLD	< LLD	< LLD	< LLD
Co-60 (LLD = 6.21E-19 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Sr-89 (LLD = 1.4E-10 Ci/ml)	Ci	---	---	---	< LLD	---	---	---	*
Sr-90 (LLD = 4.7E-11 Ci/ml)	Ci	---	---	---	< LLD	---	---	---	*
Y-88 (LLD = **)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Ru-103 (LLD = **)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	3.71E-8	< LLD	3.71E-8
Ag-110m (LLD = **)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Cs-134 (LLD = 5.20E-19 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Cs-136 (LLD = 3.72E-19 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Cs-137 (LLD = 3.84E-19 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Ba/La-140 (LLD = 1.06E-18 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	1.97E-7	< LLD	1.97E-7
Ce-144 (LLD = 2.56E-18 Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD
Others (Specify)									

* Waiting for analysis results - Data will be presented in an errata to the Semi-Annual Report.

** LLD for this isotope is being developed and will be presented in an errata to the Semi-Annual Report.

BRAIDWOOD NUCLEAR POWER STATION
 SEMIANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
 LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES
 UNIT 1

	UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUN	2nd QUARTER
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I. Fission and Activation Products

1. Total Activity Released	Ci	6.39E-2	1.18E+0	6.51E-2	1.31E+0	3.26E-2	2.42E-2	1.19E-2	6.87E-2
2. Average Concentration Released	uCi/ml	2.73E-8	6.21E-9	2.86E-8	2.01E-7	1.56E-8	1.27E-8	5.90E-9	1.14E-8
3. % of 10CFR50 Limits									
a. Quarterly Whole Body (1.5 mrem)	%	0.30	0.74	0.02	1.06	0.17	0.02	0.04	0.23
b. Quarterly Any Organ (5.0 mrem)	%	0.12	0.30	0.01	0.43	0.08	0.01	0.01	0.10
c. Annual Whole Body (3.0 mrem)	%	0.15	0.37	0.01	0.53	0.09	0.01	0.01	0.11
d. Annual Any Organ (10.0 mrem)	%	0.06	0.15	0.01	0.22	0.03	0.00	0.01	0.04

J. Tritium

1. Total Activity Released	Ci	4.02E+1	5.93E+1	3.43E+1	1.34E+2	1.69E+2	5.02E+1	3.79E+1	2.57E+2
2. Average Concentration Released	uCi/ml	1.72E-5	3.11E-5	1.51E-5	2.06E-5	8.06E-5	2.63E-5	1.88E-5	4.27E-5
3. % of Limit (3E-3 uCi/ml)	%	1.72E-3	3.11E-3	1.51E-3	2.06E-3	8.06E-3	2.63E-3	1.88E-3	4.27E-3

K. Dissolved Noble Gases

1. Total Activity Released (LLD=*)	Ci	1.54E-3	< LLD	1.94E-3	3.48E-3	< LLD	1.11E-2	1.11E-2	2.22E-2
2. Average Concentration Released (LLD=**)	uCi/ml	6.59E-10	< LLD	8.52E-10	5.34E-10	< LLD	5.82E-9	5.51E-9	3.69E-9
3. % of Limit (2E-4 uCi/ml)	%	6.59E-8	< LLD	8.52E-8	5.34E-8	< LLD	5.82E-7	5.51E-7	3.69E-7

L. Gross Alpha

1. Total Activity Released (LLD=***)	Ci	< LLD	< LLD	< LLD	< LLD	1.37E-4	< LLD	< LLD	1.37E-4
2. Average Concentration Released (LLD=****)	uCi/ml	< LLD	< LLD	< LLD	< LLD	6.54E-11	< LLD	< LLD	2.28E-11

M. Volume of Liquid Waste to Discharge	liters	3.51E+6	4.54E+6	6.05E+6	1.41E+7	5.58E+6	5.83E+6	5.83E+6	1.72E+7
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N. Volume of Dilution Water	liters	2.33E+9	1.90E+9	2.27E+9	6.50E+9	2.09E+9	1.90E+9	2.01E+9	6.00E+9
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* (LLD=3.47E-13Ci/ml)

** (LLD=3.47E-13Ci/ml)

*** (LLD=6.43E-14Ci/ml)

**** (LLD=6.43E-14Ci/ml)

BRAIDWOOD NUCLEAR POWER STATION
SEMIANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES
UNIT 2

	UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUN	2nd QUARTER
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I. Fission and Activation Products

1. Total Activity Released	Ci	6.39E-2	1.18E+0	6.51E-2	1.31E+0	3.26E-2	2.42E-2	1.19E-2	6.87E-2
2. Average Concentration Released	uCi/ml	2.73E-8	6.21E-9	2.86E-8	2.01E-7	1.56E-8	1.27E-8	5.90E-9	1.14E-8
3. % of 10CFR50 Limits									
a. Quarterly Whole Body (1.5 mrem)	%	0.30	0.74	0.02	1.06	0.17	0.02	0.04	0.23
b. Quarterly Any Organ (5.0 mrem)	%	0.12	0.30	0.01	0.43	0.08	0.01	0.01	0.10
c. Annual Whole Body (3.0 mrem)	%	0.15	0.37	0.01	0.53	0.09	0.01	0.01	0.11
d. Annual Any Organ (10.0 mrem)	%	0.06	0.15	0.01	0.22	0.03	0.00	0.01	0.04

J. Tritium

1. Total Activity Released	Ci	4.02E+1	5.93E+1	3.43E+1	1.34E+2	1.69E+2	5.02E+1	3.79E+1	2.57E+2
2. Average Concentration Released	uCi/ml	1.72E-5	3.11E-5	1.51E-5	2.06E-5	8.06E-5	2.63E-5	1.88E-5	4.27E-5
3. % of Limit (3E-3 uCi/ml)	%	1.72E-3	3.11E-3	1.51E-3	2.06E-3	8.06E-3	2.63E-3	1.88E-3	4.27E-3

K. Dissolved Noble Gases

1. Total Activity Released (LLD=*)	Ci	1.54E-3	< LLD	1.94E-3	3.48E-3	< LLD	1.11E-2	1.11E-2	2.22E-2
2. Average Concentration Released (LLD=**)	uCi/ml	6.59E-10	< LLD	8.52E-10	5.34E-10	< LLD	5.82E-9	5.51E-9	3.69E-9
3. % of Limit (2E-4 uCi/ml)	%	6.59E-8	< LLD	8.52E-8	5.34E-8	< LLD	5.82E-7	5.51E-7	3.69E-7

L. Gross Alpha

1. Total Activity Released (LLD=***)	Ci	< LLD	< LLD	< LLD	< LLD	1.37E-4	< LLD	< LLD	1.37E-4
2. Average Concentration Released (LLD=****)	uCi/ml	< LLD	< LLD	< LLD	< LLD	6.54E-11	< LLD	< LLD	2.28E-11

M. Volume of Liquid Waste to Discharge	liters	3.51E+6	4.54E+6	6.05E+6	1.41E+7	5.58E+6	5.83E+6	5.83E+6	1.72E+7
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N. Volume of Dilution Water	liters	2.33E+9	1.90E+9	2.27E+9	6.50E+9	2.09E+9	1.90E+9	2.01E+9	6.00E+9
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* (LLD=3.47E-13Ci/ml)

** (LLD=3.47E-13Ci/ml)

*** (LLD=6.43E-14Ci/ml)

**** (LLD=6.43E-14Ci/ml)

BRAIDWOOD NUCLEAR POWER STATION
SEMIANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
LIQUID EFFLUENTS
UNIT 1

		UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUN	2nd QUARTER
0. Liquid Effluents (BATCH)										
Fe-55	(LLD=*)	Ci	---	---	---	1.42E-2	---	---	---	**
Sr-89	(LLD=*)	Ci	---	---	---	< LLD	---	---	---	**
Sr-90	(LLD=*)	Ci	---	---	---	< LLD	---	---	---	**
Co-58	(LLD=3.89E-14Ci/ml)	Ci	5.10E-2	1.10E+0	4.10E-2	1.19E+0	2.05E-2	2.14E-2	9.81E-3	5.17E-2
Co-60	(LLD=5.83E-14Ci/ml)	Ci	1.87E-3	3.67E-2	2.17E-3	4.07E-2	1.51E-3	1.96E-3	1.08E-3	4.55E-3
Cs-134	(LLD=4.31E-14Ci/ml)	Ci	1.05E-3	3.05E-3	1.44E-5	4.11E-3	5.65E-4	9.02E-6	1.03E-4	6.77E-4
Cs-136	(LLD=3.83E-14Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	4.73E-5	< LLD	< LLD	4.73E-5
Cs-137	(LLD=5.64E-14Ci/ml)	Ci	3.26E-3	6.93E-3	1.45E-4	1.03E-2	1.31E-3	1.34E-4	2.25E-4	1.67E-3
I-131	(LLD=6.63E-13Ci/ml)	Ci	1.12E-3	6.12E-3	1.55E-3	8.79E-3	5.69E-5	2.53E-5	6.18E-6	8.84E-5
I-133	(LLD=5.04E-14Ci/ml)	Ci	3.48E-5	< LLD	< LLD	3.48E-5	< LLD	< LLD	< LLD	< LLD
Ba/La-140	(LLD=6.00E-14Ci/ml)	Ci	2.72E-4	9.49E-4	5.55E-6	1.23E-3	1.73E-5	< LLD	1.02E-6	1.83E-5
Xe-133	(LLD=1.34E-13Ci/ml)	Ci	2.53E-3	9.77E-3	2.40E-3	1.47E-2	1.09E-2	2.05E-2	1.21E-2	4.35E-2
Xe-135	(LLD=4.47E-14Ci/ml)	Ci	2.62E-5	1.84E-5	1.23E-5	5.69E-5	3.36E-5	2.97E-4	3.46E-4	6.77E-4
Others (Specify)										
Mn-54	(LLD=3.98E-14Ci/ml)	Ci	3.34E-4	3.38E-3	3.30E-3	7.01E-3	4.82E-4	3.89E-4	4.42E-4	1.31E-3
Ze-95	(LLD=8.49E-14Ci/ml)	Ci	2.24E-5	< LLD	8.97E-4	9.19E-4	5.91E-4	< LLD	2.90E-5	6.20E-4
Nb-95	(LLD=5.07E-14Ci/ml)	Ci	8.23E-5	9.83E-5	1.59E-3	1.77E-3	9.11E-4	2.99E-6	6.84E-5	9.82E-4
Sb-124	(LLD=*)	Ci	2.74E-3	6.55E-3	2.33E-3	1.16E-2	6.84E-4	1.42E-4	5.60E-6	8.32E-4
Fe-59	(LLD=9.69E-14Ci/ml)	Ci	1.96E-3	6.43E-3	3.14E-3	1.15E-2	7.58E-4	1.78E-5	5.42E-7	7.76E-4
Be-7	(LLD=*)	Ci	1.75E-5	< LLD	< LLD	1.75E-5	< LLD	< LLD	< LLD	< LLD
Ru-105	(LLD=*)	Ci	6.90E-6	< LLD	< LLD	6.90E-6	< LLD	< LLD	< LLD	< LLD
Sr-91	(LLD=*)	Ci	4.59E-6	< LLD	< LLD	4.59E-6	< LLD	< LLD	< LLD	< LLD
Sb-125	(LLD=*)	Ci	1.02E-4	3.90E-3	1.06E-3	5.06E-3	5.83E-4	1.03E-4	< LLD	6.86E-4
Co-57	(LLD=4.25E-14Ci/ml)	Ci	5.38E-5	1.44E-3	< LLD	1.49E-3	2.25E-6	5.95E-6	1.74E-5	2.56E-5
I-132	(LLD=*)	Ci	< LLD	2.20E-3	< LLD	2.20E-3	< LLD	< LLD	< LLD	< LLD
Na-24	(LLD=*)	Ci	< LLD	6.07E-5	5.99E-6	6.67E-5	4.95E-6	< LLD	8.65E-7	5.82E-6
Br-82	(LLD=*)	Ci	< LLD	1.70E-3	1.64E-5	1.72E-3	< LLD	< LLD	< LLD	< LLD
Kr-88	(LLD=1.48E-13Ci/ml)	Ci	< LLD	8.90E-3	2.41E-5	8.92E-3	< LLD	< LLD	< LLD	< LLD
Cr-51	(LLD=*)	Ci	< LLD	7.11E-4	6.58E-3	7.29E-3	3.08E-3	< LLD	4.98E-5	3.13E-3
Cs-138	(LLD=*)	Ci	< LLD	1.29E-4	< LLD	1.29E-4	< LLD	< LLD	< LLD	< LLD
Zr-97	(LLD=*)	Ci	< LLD	< LLD	1.26E-3	1.26E-3	< LLD	1.48E-3	2.78E-5	1.51E-3
As-76	(LLD=*)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	1.36E-5	< LLD	1.36E-5
Xe-133m	(LLD=3.47E-13Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	5.35E-5	2.25E-5	7.60E-5
Mo-99	(LLD=4.37E-13Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	1.51E-5	1.51E-5

*LLD for this isotope is being developed and will be presented in an errata to the Semi-Annual Report.

**Waiting for analysis results - Data will be presented in an errata to the Semi-Annual Report.

BRAIDWOOD NUCLEAR POWER STATION
SEMIANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
LIQUID EFFLUENTS
UNIT 2

		UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUN	2nd QUARTER
0. Liquid Effluents (BATCH)										
Fe-55	(LLD=*)	Ci	---	---	---	1.42E-2	---	---	---	**
Sr-89	(LLD=*)	Ci	---	---	---	< LLD	---	---	---	**
Sr-90	(LLD=*)	Ci	---	---	---	< LLD	---	---	---	**
Co-58	(LLD=3.89E-14Ci/ml)	Ci	5.10E-2	1.10E+0	4.10E-2	1.19E+0	2.05E-2	2.14E-2	9.81E-3	5.17E-2
Co-60	(LLD=5.83E-14Ci/ml)	Ci	1.87E-3	3.67E-2	2.17E-3	4.07E-2	1.51E-3	1.96E-3	1.08E-3	4.55E-3
Cs-134	(LLD=4.31E-14Ci/ml)	Ci	1.05E-3	3.05E-3	1.44E-5	4.11E-3	5.65E-4	9.02E-6	1.03E-4	6.77E-4
Cs-136	(LLD=3.83E-14Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	4.73E-5	< LLD	< LLD	4.73E-5
Cs-137	(LLD=5.64E-14Ci/ml)	Ci	3.26E-3	6.93E-3	1.45E-4	1.03E-2	1.31E-3	1.34E-4	2.25E-4	1.67E-3
I-131	(LLD=5.04E-14Ci/ml)	Ci	1.12E-3	6.12E-3	1.55E-3	8.79E-3	5.69E-5	2.53E-5	6.18E-6	8.84E-5
I-133	(LLD=6.00E-14Ci/ml)	Ci	3.48E-5	< LLD	< LLD	3.48E-5	< LLD	< LLD	< LLD	< LLD
Ba/La-140	(LLD=6.00E-14Ci/ml)	Ci	2.72E-4	9.49E-4	5.55E-6	1.23E-3	1.73E-5	< LLD	1.02E-6	1.83E-5
Xe-133	(LLD=1.34E-13Ci/ml)	Ci	2.53E-3	9.77E-3	2.40E-3	1.47E-2	1.09E-2	2.05E-2	1.21E-2	4.35E-2
Xe-135	(LLD=4.47E-14Ci/ml)	Ci	2.62E-5	1.84E-5	1.23E-5	5.69E-5	3.36E-5	2.97E-4	3.46E-4	6.77E-4
Others (Specify)										
Mn-54	(LLD=3.98E-14Ci/ml)	Ci	3.34E-4	3.38E-3	3.30E-3	7.01E-3	4.82E-4	3.89E-4	4.42E-4	1.31E-3
Zr-95	(LLD=8.49E-14Ci/ml)	Ci	2.24E-5	< LLD	8.97E-4	9.19E-4	5.91E-4	< LLD	2.90E-5	6.20E-4
Nb-95	(LLD=5.07E-14Ci/ml)	Ci	8.23E-5	9.83E-5	1.59E-3	1.77E-3	9.11E-4	2.99E-6	6.84E-5	9.82E-4
Sb-124	(LLD=*)	Ci	2.74E-3	6.55E-3	2.33E-3	1.16E-2	6.84E-4	1.42E-4	5.60E-6	8.32E-4
Fe-59	(LLD=9.69E-14Ci/ml)	Ci	1.96E-3	6.43E-3	3.14E-3	1.15E-2	7.58E-4	1.78E-5	5.42E-7	7.76E-4
Be-7	(LLD=*)	Ci	1.75E-5	< LLD	< LLD	1.75E-5	< LLD	< LLD	< LLD	< LLD
Ru-105	(LLD=*)	Ci	6.90E-6	< LLD	< LLD	6.90E-6	< LLD	< LLD	< LLD	< LLD
Sr-91	(LLD=*)	Ci	4.59E-6	< LLD	< LLD	4.59E-6	< LLD	< LLD	< LLD	< LLD
Sb-125	(LLD=*)	Ci	1.02E-4	3.90E-3	1.06E-3	5.06E-3	5.83E-4	1.03E-4	< LLD	6.86E-4
Co-57	(LLD=4.25E-14Ci/ml)	Ci	5.38E-5	1.44E-3	< LLD	1.49E-3	2.25E-6	5.95E-6	1.74E-5	2.56E-5
I-132	(LLD=*)	Ci	< LLD	2.20E-3	< LLD	2.20E-3	< LLD	< LLD	< LLD	< LLD
Na-24	(LLD=*)	Ci	< LLD	6.07E-5	5.99E-6	6.67E-5	4.95E-6	< LLD	8.65E-7	5.82E-6
Br-82	(LLD=*)	Ci	< LLD	1.70E-3	1.64E-5	1.72E-3	< LLD	< LLD	< LLD	< LLD
Kr-88	(LLD=1.48E-13Ci/ml)	Ci	< LLD	8.90E-3	2.41E-5	8.92E-3	< LLD	< LLD	< LLD	< LLD
Cr-51	(LLD=*)	Ci	< LLD	7.11E-4	6.58E-3	7.29E-3	3.08E-3	< LLD	4.98E-5	3.13E-3
Cs-138	(LLD=*)	Ci	< LLD	1.29E-4	< LLD	1.29E-4	< LLD	< LLD	< LLD	< LLD
Zr-97	(LLD=*)	Ci	< LLD	< LLD	1.26E-3	1.26E-3	< LLD	1.48E-3	2.78E-5	1.51E-3
As-76	(LLD=*)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	1.36E-5	< LLD	1.36E-5
Xe-133m	(LLD=3.47E-13Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	5.35E-5	2.25E-5	7.60E-5
Mo-99	(LLD=4.37E-13Ci/ml)	Ci	< LLD	< LLD	< LLD	< LLD	< LLD	< LLD	1.51E-5	1.51E-5

*LLD for this isotope is being developed and will be presented in an errata to the Semi-Annual Report.

**Waiting for analysis results - Data will be presented in an errata to the Semi-Annual Report.

BRAIDWOOD NUCLEAR POWER STATION
SEMIANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
LIQUID EFFLUENTS
UNIT 1

		UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUN	2nd QUARTER
0. Liquid Effluents (CONTINUOUS)										
Fe-55	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Sr-89	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Sr-90	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Co-58	(LLD=3.89E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Co-60	(LLD=5.83E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Cs-134	(LLD=4.31E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Cs-136	(LLD=3.83E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Cs-137	(LLD=5.64E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
I-131	(LLD=5.04E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
I-133	(LLD=6.00E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Ba/La-140	(LLD=6.00E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Xe-133	(LLD=1.34E-13Ci/ml)	Ci	0	0	0	0	0	0	0	0
Xe-135	(LLD=4.47E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Others (Specify)										
Mn-54	(LLD=3.98E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Zr-95	(LLD=8.49E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Nb-95	(LLD=5.07E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Sb-124	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Fe-59	(LLD=9.69E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Be-7	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Ru-105	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Sr-91	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Sb-125	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Co-57	(LLD=4.25E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
I-132	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Na-24	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Br-82	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Kr-88	(LLD=1.48E-13Ci/ml)	Ci	0	0	0	0	0	0	0	0
Cr-51	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Cs-138	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Zr-97	(LLD=*)	Ci	0	0	0	0	0	0	0	0
As-76	(LLD=*)	Ci	0	0	0	0	0	0	0	0
Xe-133m	(LLD=3.47E-13Ci/ml)	Ci	0	0	0	0	0	0	0	0
Mo-99	(LLD=4.37E-13Ci/ml)	Ci	0	0	0	0	0	0	0	0

*LLD for this isotope is being developed and will be presented in an errata to the Semi-Annual Report.

BRAIDWOOD NUCLEAR POWER STATION
SEMIANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
LIQUID EFFLUENTS
UNIT 2

	UNITS	JAN	FEB	MAR	1st QUARTER	APR	MAY	JUN	2nd QUARTER
0. Liquid Effluents (CONTINUOUS)									
Fe-55 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Sr-89 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Sr-90 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Co-58 (LLD=3.89E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Co-60 (LLD=5.83E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Cs-134 (LLD=4.31E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Cs-136 (LLD=3.83E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Cs-137 (LLD=5.64E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
I-131 (LLD=5.04E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
I-133 (LLD=6.00E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Ba/La-140 (LLD=6.00E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Xe-133 (LLD=1.34E-13Ci/ml)	Ci	0	0	0	0	0	0	0	0
Xe-135 (LLD=4.47E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Others (Specify)									
Mn-54 (LLD=3.98E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Zr-95 (LLD=8.49E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Nb-95 (LLD=5.07E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Sb-124 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Fe-59 (LLD=9.69E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
Be-7 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Ru-105 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Sr-91 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Sb-125 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Co-57 (LLD=4.25E-14Ci/ml)	Ci	0	0	0	0	0	0	0	0
I-132 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Na-24 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Br-82 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Kr-88 (LLD=1.48E-13Ci/ml)	Ci	0	0	0	0	0	0	0	0
Cr-51 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Cs-138 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Zr-97 (LLD=*)	Ci	0	0	0	0	0	0	0	0
As-76 (LLD=*)	Ci	0	0	0	0	0	0	0	0
Xe-133m (LLD=3.47E-13Ci/ml)	Ci	0	0	0	0	0	0	0	0
Mo-99 (LLD=4.37E-13Ci/ml)	Ci	0	0	0	0	0	0	0	0

*LLD for this isotope is being developed and will be presented in an errata to the Semi-Annual Report.

BRAIDWOOD NUCLEAR POWER STATION
SEMI ANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
SOLID RADIOACTIVE WASTE

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL

DESCRIPTION	VOLUME (m ³)	CURIES	MAJOR NUCLIDES/CURIES			
Process Waste	2.36E+1	2.36E+1 Error 2.05E+0%	Co-58	8.09E+0	±	3.36E+0%
			Fe-55	7.70E+0	±	4.84E+0%
			Sn-113	1.88E+0	±	5.38E+0%
			Be-7	1.80E+0	±	5.37E+0%
			Mn-54	9.64E-1	±	3.26E+0%
			Co-60	7.49E-1	±	3.66E+0%
			Cr-51	5.35E-1	±	5.01E+0%
			Fe-59	4.15E-1	±	5.02E+0%
			Ni-63	3.82E-1	±	2.39E+0%
			H-3	2.87E-1	±	2.14E+0%
			Nb-95	2.61E-1	±	4.90E+0%
			Dry Active Waste	3.00E+1	8.51E-2 Error 5.28 E-1%	Co-58
Co-60	1.70E-2	±				1.02E+0%
Mn-54	1.31E-2	±				9.74E-1%
Fe-55	7.96E-3	±				1.01E+0%
Ni-63	2.17E-3	±				9.96E-1%
Fe-59	1.48E-3	±				1.02E+0%
C-14	1.17E-3	±				1.02E+0%
Nb-95	1.16E-3	±				1.01E+0%
Cr-51	9.93E-4	±				1.07E+0%
Irradiated Components	0.00E+0	0.00E+0				
Other: Smoke Detectors	1.38E-1*	7.58E-5 Error 1.00E + 0%				

* This volume is included in the volume of process waste.

Number of Shipments: 6

Mode of Transportation: Exclusive Use Vehicle

Destination: U.S. Ecology, Richland, WA (5)

SEG, Oak Ridge, TN (1)

B. IRRADIATED FUEL SHIPMENTS

No irradiated fuel shipments for January to June, 1989

BRAIDWOOD NUCLEAR POWER STATION
SEMI ANNUAL EFFLUENT REPORT FOR JANUARY TO JUNE 1989
SOLID RADIOACTIVE WASTE
(continued)

Shipment Number	Waste Class	Type of Container	Solidification Agent or Absorbent
RWS-9001	A	LSA	Envirostone
RWS-9002	A	LSA	Safe-N-Dri
RWS-9003	A	LSA	Safe-N-Dri
RWS-9004	A	LSA	Safe-N-Dri
RWS-9005	A	LSA	None
RWS-9006	A	LSA	Safe-N-Dri

(Final)