Commonwealth Edison Company
Braidwood Generation Station
Route #1, Box 84
Braceville, IL 60407-9619
Tel 815-458-2801

ComEd

September 15, 1995
BW/95-0084

William L. Axelson
Director, Division of Reactor Projects
U.S. Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, Illinois 60532

Dear Mr. Axelson:

Enclosed is the errata to the Braidwood Station Semi-Annual Effluent Report, Docket numbers STN 50-456 and STN 50-457 for January through December of 1994.

Please note that this report contains all the effluent data for the entire year with revision bars indicating changes from the previous report, issued in March of 1995.

If you have any questions, please contact Jeffry W. Birkmeier at (815) 458-2801, extension 2932.

David J. Miller for
T. J. Tulon
Station Manager
Braidwood Nuclear Station

TJT/JWB/dla
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Enclosure

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EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT

Supplemental Information

January - December 1994

Facility: BRAIDWOOD NUCLEAR POWER STATION

Licensee: COMMONWEALTH EDISON COMPANY

1. Regulatory Limits

a. For Noble Gases:

Dose Rate

1) Less than 500 mrem/year to the whole body.
2) Less than 3000 mrem/year to the skin.

Dose Gamma Radiation

1) Less than or equal to 5 mrad/quarter.
2) Less than or equal to 10 mrad/year.

Beta Radiation

1) Less than or equal to 10 mrad/quarter.
2) Less than or equal to 20 mrad/year.

b.,c. For Iodine-131, for Iodine-133, and for all radionuclides in particulate form with half-lives greater than 8 days.

Dose Rate

1) Less than 1500 mrem/year.

Dose

1) Less than or equal to 7.5 mrem/quarter.
2) Less than or equal to 15 mrem/year.

d. For Liquid

1) Less than or equal to 3 mrem to the whole body during any calendar quarter.
2) Less than or equal to 10 mrem to any organ during any calendar quarter.
3) Less than or equal to 6 mrem to the whole body during any calendar year.
4) Less than or equal to 20 mrem to any organ during any calendar year.

2. Maximum Permissible Concentration

a., b.,c., For fission and activation gases, iodines, and particulates with half-lives greater than 8 days, allowable release limits are calculated by solving equations 10.1 and 10.2 from the Offsite Dose Calculation Manual.

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d. For liquid effluents, allowable release limits are calculated by solving equations 10.3 and 10.4 from the Offsite Dose Calculation Manual.

3. Average Energy

The average gamma energy for the Braidwood noble gas waste streams were 0.070 MeV for Unit 1 and 0.061 MeV for Unit 2. The average beta energy for Braidwood noble gas waste streams were 0.109 MeV for Unit 1 and 0.106 MeV for Unit 2.

4. Measurements and Approximations of Total Radioactivity

a. Fission and Activation Gases:
b. Iodines:
c. Particulates:

The Auxiliary Building ventilation exhaust system is continually monitored for iodines and particulates. These samples are pulled every 7 days and analyzed by gamma isotopic and gross alpha. Noble gas and tritium grab samples are pulled and analyzed by gamma isotopic weekly.

The average flow at the release points are used to calculate the curies released.

d. Liquid Effluents

The liquid release tanks are analyzed before discharge by gamma isotopic and tritium. A composite representative portion of this sample saved. This is composited, every 31 days, with other discharges that occurred and is analyzed for tritium and gross alpha. The batch composites are composited quarterly and sent to a vendor for Sr-89/90 and Fe-55. Circulating Water Blowdown, Condensate Polisher Sump and Waste Water Treatment are composited quarterly and sent to a vendor for Sr-89/90 and Fe-55 analysis.

The tank volumes and activities are used to calculate the curies released for the liquid release tanks. The total water released and the activity is used to calculate the diluted activity released at the discharge point from batch discharges.

e. Less than the lower limit of detection (<LLD).

Samples are analyzed such that the Technical Specification LLD requirements are met. When a nuclide is not detected during the quarter then <LLD is reported.

BRAIDWOOD NUCLEAR POWER STATION
SEMI-ANNUAL EFFLUENT REPORT FOR 1994
LIQUID RELEASES
UNIT 1 (Docket Number 50-456)
SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	**Total**
A. Fission and Activation Products						
1. Total Activity Released	Ci	2.02E-01	9.82E-02	3.80E-02	1.78E-01	**5.16E-01**
2. Average Concentration Released	uCi/ml	8.62E-08	2.82E-08	3.07E-08	6.30E-08	5.22E-08
B. Tritium						
1. Total Activity Released	Ci	1.79E+02	1.16E+02	2.20E+02	1.03E+02	**6.18E+02**
2. Average Concentration Released	uCi/ml	7.63E-05	3.33E-05	1. /8E-04	3.65E-05	6.25E-05
3. % of Limit (1E-3 uCi/ml)	%	7.63E+00	3.33E+00	1.78E+01	3.65E+00	6.25E+00
C. Dissolved Noble Gases						
1. Total Activity Released	Ci	5.36E-02	5.74E-03	3.40E-03	1.49E-04	**6.29E-02**
2. Average Concentration Released	uCi/ml	2.29E-08	1.65E-09	2.75E-09	5.28E-11	6.36E-09
3. % of Limit (2E-4 uCi/ml)	%	1.15E-02	8.25E-04	1.38E-03	2.64E-05	3.18E-03
D. Gross Alpha						
1. Total Activity Released	Ci	1.31E-04	<LLD	<LLD	<LLD	**1.31E-04**
2. Average Concentration Released	uCi/ml	5.60E-11	<LLD	<LLD	<LLD	1.32E-11
E. Volume of Releases						
1. Volume of Liquid Waste to Discharg	liters	4.66E+06	3.39E+06	6.03E+06	3.19E+06	**1.73E+07**
2. Volume of Dilution Water	liters	2.34E+09	3.48E+09	1.23E+09	2.82E+09	**9.87E+09**

Note: LLD Values are included in Appendix A of this report.

Note: % Limit Values are included in Appendix B of this report.

BRAIDWOOD NUCLEAR POWER STATION
SEMI-ANNUAL EFFLUENT REPORT FOR 1994
LIQUID RELEASES
UNIT 1 (Docket Number 50-456)
BATCH MODE

Nuclides From Batch Releases	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
H-3	Ci	1.79E+02	1.16E+02	2.20E+02	1.03E+02	**6.18E+02**
Na-24	Ci	5.63E-05	<LLD	<LLD	<LLD	**5.63E-05**
Ar-41	Ci	<LLD	<LLD	<LLD	8.10E-06	**8.10E-06**
Cr-51	Ci	8.76E-03	1.42E-02	9.41E-04	3.41E-02	**5.80E-02**
Mn-54	Ci	2.23E-03	1.14E-03	1.79E-03	1.70E-03	**6.86E-03**
Fe-55	Ci	4.39E-02	2.08E-02	7.81E-04	2.52E-02	**9.07E-02**
Co-57	Ci	2.02E-04	8.14E-05	8.62E-05	9.56E-05	**4.65E-04**
Co-58	Ci	7.52E-02	4.02E-02	1.20E-02	6.63E-02	**1.94E-01**
Fe-59	Ci	1.55E-03	1.44E-03	5.61E-05	4.76E-03	**7.81E-03**
Co-60	Ci	1.73E-02	5.81E-03	7.66E-03	9.98E-03	**4.08E-02**
Ni-65	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Zn-65	Ci	<LLD	1.38E-05	1.38E-05	8.57E-05	**1.13E-04**
Br-82	Ci	<LLD	<LLD	8.63E-06	<LLD	**8.63E-06**
Kr-85	Ci	1.10E-03	<LLD	2.31E-03	<LLD	**3.41E-03**
Kr-85m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-89	Ci	<LLD	8.92E-05	<LLD	<LLD	**8.92E-05**
Sr-90	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-92	Ci	2.99E-05	2.19E-05	1.29E-05	7.63E-04	**8.28E-04**
Nb-95	Ci	8.98E-04	2.03E-03	8.80E-04	2.38E-03	**6.19E-03**
Zr-95	Ci	5.76E-04	1.20E-03	3.04E-04	1.53E-03	**3.61E-03**
Zr-97	Ci	<LLD	2.10E-04	3.56E-06	8.63E-05	**3.00E-04**
Mo-99	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Tc-99m	Ci	1.44E-05	<LLD	<LLD	<LLD	**1.44E-05**
Ru-105	Ci	1.98E-04	<LLD	6.70E-06	<LLD	**2.05E-04**
Ag-110m	Ci	5.52E-05	1.29E-03	3.49E-04	2.21E-03	**3.90E-03**
Sn-113	Ci	1.13E-04	1.59E-04	3.75E-05	1.65E-04	**4.75E-04**
Sn-117m	Ci	<LLD	7.42E-05	<LLD	6.47E-05	**1.39E-04**
Sb-122	Ci	1.04E-03	<LLD	1.44E-05	2.75E-04	**1.33E-03**
Sb-124	Ci	3.93E-03	1.20E-03	4.00E-04	1.86E-03	**7.39E-03**
Sb-125	Ci	1.28E-02	6.28E-03	8.65E-03	9.28E-03	**3.70E-02**
Sb-126	Ci	1.20E-04	<LLD	<LLD	1.40E-04	**2.60E-04**
I-131	Ci	3.09E-03	6.34E-04	1.82E-04	<LLD	**3.91E-03**
I-132	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Te-132	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
I-133	Ci	3.74E-05	1.38E-05	<LLD	1.03E-03	**1.08E-03**
Xe-133	Ci	5.21E-02	5.72E-03	1.07E-03	1.40E-04	**5.90E-02**
Xe-133m	Ci	2.42E-04	<LLD	<LLD	<LLD	**2.42E-04**
Cs-134	Ci	3.08E-03	3.65E-04	1.27E-03	6.05E-05	**4.78E-03**
Xe-135	Ci	1.42E-04	1.89E-05	1.30E-05	<LLD	**1.74E-04**
I-135	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Cs-136	Ci	3.81E-04	<LLD	<LLD	1.89E-04	**5.70E-04**
Cs-137	Ci	4.50E-03	7.74E-04	2.52E-03	4.02E-04	**8.20E-03**
Ba\La-140	Ci	3.37E-06	3.82E-05	<LLD	8.47E-05	**1.26E-04**
Ce-144	Ci	<LLD	4.76E-05	<LLD	<LLD	**4.76E-05**
Hf-181	Ci	4.68E-04	<LLD	<LLD	4.28E-05	**5.11E-04**
W-187	Ci	<LLD	2.21E-05	<LLD	<LLD	**2.21E-05**

BRAIDWOOD NUCLEAR POWER STATION
SEMI-ANNUAL EFFLUENT REPORT FOR 1994
LIQUID RELEASES
UNIT 1 (Docket Number 50-456)
CONTINUOUS MODE

Nuclides From Continuous Releases	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	**Total**
H-3	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Na-24	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ar-41	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Cr-51	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Mn-54	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Fe-55	Ci	<LLD	<LLD	4.80E-05	2.55E-05	**7.35E-05**
Co-57	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Co-58	Ci	<LLD	<LLD	<LLD	1.53E-02	**1.53E-02**
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Co-60	Ci	2.22E-02	<LLD	<LLD	<LLD	**2.22E-02**
Ni-65	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Zn-65	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Br-82	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-85	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-85m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-89	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-90	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-92	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Nb-95	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Zr-95	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Zr-97	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Mo-99	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Tc-99m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ru-105	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ag-110m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sn-113	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sn-117m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sb-124	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sb-125	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sb-126	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
I-131	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
I-132	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Te-132	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
I-133	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-133	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Cs-134	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-135	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
I-135	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Cs-137	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ba\La-140	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Hf-181	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
W-187	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**

BRAIDWOOD NUCLEAR POWER STATION
SEMI-ANNUAL EFFLUENT REPORT FOR 1994
LIQUID RELEASES
UNIT 2 (Docket Number 50-457)
SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
A. Fission and Activation Products						
1. Total Activity Released	Ci	2.02E-01	9.82E-02	3.80E-02	1.78E-01	**5.16E-01**
2. Average Concentration Released	uCi/ml	8.62E-08	2.82E-08	3.07E-08	6.30E-08	5.22E-08
B. Tritium						
1. Total Activity Released	Ci	1.79E+02	1.16E+02	2.20E+02	1.03E+02	**6.18E+02**
2. Average Concentration Released	uCi/ml	7.63E-05	3.33E-05	1.78E-04	3.65E-05	6.25E-05
3. % of Limit (3E-3 uCi/ml)	%	7.63E+00	3.33E+00	1.78E+01	3.65E+00	6.25E+00
C. Dissolved Noble Gases						
1. Total Activity Released	Ci	5.36E-02	5.74E-03	3.40E-03	1.49E-04	**6.29E-02**
2. Average Concentration Released	uCi/ml	2.29E-08	1.65E-09	2.75E-09	5.28E-11	6.36E-09
3. % of Limit (2E-4 uCi/ml)	%	1.15E-02	8.25E-04	1.38E-03	2.64E-05	3.18E-03
D. Gross Alpha						
1. Total Activity Released	Ci	1.31E-04	<LLD	<LLD	<LLD	**1.31E-04**
2. Average Concentration Released	uCi/ml	5.60E-11	<LLD	<LLD	<LLD	1.32E-11
E. Volume of Releases						
1. Volume of Liquid Waste to Discharge	liters	4.66E+06	3.39E+06	6.03E+06	3.19E+06	**1.73E+07**
2. Volume of Dilution Water	liters	2.34E+09	3.48E+09	1.23E+09	2.82E+09	**9.87E+09**

Note: LLD Values are included in Appendix A of this report.

Note: % Limit Values are included in Appendix B of this report.

BRAIDWOOD NUCLEAR POWER STATION
SEMI-ANNUAL EFFLUENT REPORT FOR 1994
LIQUID RELEASES
UNIT 2 (Docket Number 50-457)
BATCH MODE

Nuclides From Batch Releases	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	**Total**
H-3	Ci	1.79E+02	1.16E+02	2.20E+02	1.03E+02	**6.18E+02**
Na-24	Ci	5.63E-05	<LLD	<LLD	<LLD	**5.63E-05**
Ar-41	Ci	<LLD	<LLD	<LLD	8.10E-06	**8.10E-06**
Cr-51	Ci	8.76E-03	1.42E-02	9.41E-04	3.41E-02	**5.80E-02**
Mn-54	Ci	2.23E-03	1.14E-03	1.79E-03	1.70E-03	**6.86E-03**
Fe-55	Ci	4.39E-02	2.08E-02	7.81E-04	2.52E-02	**9.07E-02**
Co-57	Ci	2.02E-04	8.14E-05	8.62E-05	9.56E-05	**4.65E-04**
Co-58	Ci	7.52E-02	4.02E-02	1.20E-02	6.63E-02	**1.94E-01**
Fe-59	Ci	1.55E-03	1.44E-03	5.61E-05	4.76E-03	**7.81E-03**
Co-60	Ci	1.73E-02	5.81E-03	7.66E-03	9.98E-03	**4.08E-02**
Ni-65	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Zn-65	Ci	<LLD	1.38E-05	1.38E-05	8.57E-05	**1.13E-04**
Br-82	Ci	<LLD	<LLD	8.63E-06	<LLD	**8.63E-06**
Kr-85	Ci	1.10E-03	<LLD	2.31E-03	<LLD	**3.41E-03**
Kr-85m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-89	Ci	<LLD	8.92E-05	<LLD	<LLD	**8.92E-05**
Sr-90	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-92	Ci	2.99E-05	2.19E-05	1.29E-05	7.63E-04	**8.28E-04**
Nb-95	Ci	8.98E-04	2.03E-03	8.80E-04	2.38E-03	**6.19E-03**
Zr-95	Ci	5.76E-04	1.20E-03	3.04E-04	1.53E-03	**3.61E-03**
Zr-97	Ci	<LLD	2.10E-04	3.56E-06	8.63E-05	**3.00E-04**
Mo-99	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Tc-99m	Ci	1.44E-05	<LLD	<LLD	<LLD	**1.44E-05**
Ru-105	Ci	1.98E-04	<LLD	6.70E-06	<LLD	**2.05E-04**
Ag-110m	Ci	5.52E-05	1.29E-03	3.49E-04	2.21E-03	**3.90E-03**
Sn-113	Ci	1.13E-04	1.59E-04	3.75E-05	1.65E-04	**4.75E-04**
Sn-117m	Ci	<LLD	7.42E-05	<LLD	6.47E-05	**1.39E-04**
Sb-122	Ci	1.04E-03	<LLD	1.44E-05	2.75E-04	**1.33E-03**
Sb-124	Ci	3.93E-03	1.20E-03	4.00E-04	1.86E-03	**7.39E-03**
Sb-125	Ci	1.28E-02	6.28E-03	8.65E-03	9.28E-03	**3.70E-02**
Sb-126	Ci	1.20E-04	<LLD	<LLD	1.40E-04	**2.60E-04**
I-131	Ci	3.09E-03	6.34E-04	1.82E-04	<LLD	**3.91E-03**
I-132	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Te-132	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
I-133	Ci	3.74E-05	1.38E-05	<LLD	1.03E-03	**1.08E-03**
Xe-133	Ci	5.21E-02	5.72E-03	1.07E-03	1.40E-04	**5.90E-02**
Xe-133m	Ci	2.42E-04	<LLD	<LLD	<LLD	**2.42E-04**
Cs-134	Ci	3.08E-03	3.65E-04	1.27E-03	6.05E-05	**4.78E-03**
Xe-135	Ci	1.42E-04	1.89E-05	1.30E-05	<LLD	**1.74E-04**
I-135	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Cs-136	Ci	3.81E-04	<LLD	<LLD	1.89E-04	**5.70E-04**
Cs-137	Ci	4.50E-03	7.74E-04	2.52E-03	4.02E-04	**8.20E-03**
Ba\La-140	Ci	3.37E-06	3.82E-05	<LLD	8.47E-05	**1.26E-04**
Ce-144	Ci	<LLD	4.76E-05	<LLD	<LLD	**4.76E-05**
Hf-181	Ci	4.68E-04	<LLD	<LLD	4.28E-05	**5.11E-04**
W-187	Ci	<LLD	2.21E-05	<LLD	<LLD	**2.21E-05**

BRAIDWOOD NUCLEAR POWER STATION
SEMI-ANNUAL EFFLUENT REPORT FOR 1994
LIQUID RELEASES
UNIT 2 (Docket Number 50-457)
CONTINUOUS MODE

Nuclides From Continuous Releases	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	**Total**
H-3	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Na-24	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ar-41	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Cr-51	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Mn-54	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Fe-55	Ci	<LLD	<LLD	4.80E-05	2.55E-05	**7.35E-05**
Co-57	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Co-58	Ci	<LLD	<LLD	<LLD	1.53E-02	**1.53E-02**
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Co-60	Ci	2.22E-02	<LLD	<LLD	<LLD	**2.22E-02**
Ni-65	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Zn-65	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Br-82	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-85	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-85m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-89	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-90	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-92	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Nb-95	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Zr-95	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Zr-97	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Mo-99	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Tc-99m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ru-105	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ag-110m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sn-113	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sn-117m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sb-124	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sb-125	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sb-126	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
I-131	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
I-132	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Te-132	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
I-133	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-133	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Cs-134	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-135	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
I-135	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Cs-137	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ba\La-140	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Hf-181	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
W-187	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**

BRAIDWOOD NUCLEAR POWER STATION
SEMI-ANNUAL EFFLUENT REPORT FOR 1994
GAS RELEASES
UNIT 1 (Docket Number 50-456)
SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
A. Fission and Activation Gas Releases						
1. Total Release Activity	Ci	1.76E+02	5.02E+01	3.81E+00	5.10E+00	**2.35E+02**
2. Average Release Rate	uCi/sec	2.23E+01	6.37E+00	4.83E-01	6.47E-01	**7.45E+00**
B. Iodine Releases						
1. Total I-131 Activity	Ci	5.89E-05	1.55E-04	9.64E-07	<LLD	**2.15E-04**
2. Average Release Rate	uCi/sec	7.47E-06	1.97E-05	1.22E-07	<LLD	**6.82E-06**
C. Particulate (> 8 day half-life) Releases						
1. Gross Activity	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
2. Average Release Rate	uCi/sec	<LLD	<LLD	<LLD	<LLD	**<LLD**
3. Gross Alpha Activity	Ci	2.53E-07	4.61E-07	1.61E-07	2.16E-07	**1.09E-06**
D. Tritium Releases						
1. Total Release Activity	Ci	1.02E+00	1.22E+00	7.38E-01	4.69E+00	**7.67E+00**
2. Average Release Rate	uCi/sec	1.29E-01	1.55E-01	9.36E-02	5.95E-01	**2.43E-01**
E. Sum of Iodine, Particulate (> 8 day half-life), and Tritium Releases.						
1. Total Release Activity	Ci	1.02E+00	1.22E+00	7.38E-01	4.69E+00	**7.67E+00**

Note: LLD Values are included in Appendix A of this report.

Note: % Limit Values are included in Appendix B of this report.

BRAIDWOOD NUCLEAR POWER STATION
SEMI-ANNUAL EFFLUENT REPORT FOR 1994
GAS RELEASES
UNIT 1 (Docket Number 50-456)
BATCH MODE

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
A. Particulate (> 8 day half-life) Releases						
Mn-54	Ci	0.00	0.00	0.00	0.00	**0.00**
Co-58	Ci	0.00	0.00	0.00	0.00	**0.00**
Fe-59	Ci	0.00	0.00	0.00	0.00	**0.00**
Co-60	Ci	0.00	0.00	0.00	0.00	**0.00**
Sr-89	Ci	0.00	0.00	0.00	0.00	**0.00**
Sr-90	Ci	0.00	0.00	0.00	0.00	**0.00**
Zr-95	Ci	0.00	0.00	0.00	0.00	**0.00**
Ru-103	Ci	0.00	0.00	0.00	0.00	**0.00**
Cs-134	Ci	0.00	0.00	0.00	0.00	**0.00**
Cs-137	Ci	0.00	0.00	0.00	0.00	**0.00**
Ba\La-140	Ci	0.00	0.00	0.00	0.00	**0.00**
Ce-144	Ci	0.00	0.00	0.00	0.00	**0.00**
Others (Specify)	Ci	0.00	0.00	0.00	0.00	**0.00**
B. Tritium Releases						
1. Total Release Activity	Ci	1.01E+00	9.68E-02	4.33E-02	6.65E-02	**1.22E+00**
C. Fission and Activation Gas Releases						
Ar-41	Ci	3.61E-02	3.41E-02	7.29E-02	8.78E-02	**2.31E-01**
Kr-85	Ci	1.30E-01	5.89E-01	<LLD	<LLD	**7.19E-01**
Kr-85m	Ci	5.23E-01	3.16E-03	3.90E-04	<LLD	**5.27E-01**
Kr-87	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-88	Ci	2.98E-01	<LLD	<LLD	<LLD	**2.98E-01**
Xe-131m	Ci	1.88E+00	6.49E-01	2.14E-02	6.05E-03	**2.56E+00**
Xe-133	Ci	1.44E+02	4.53E+01	2.08E+00	3.76E+00	**1.95E+02**
Xe-133m	Ci	1.95E+00	2.99E-01	1.18E-02	2.99E-02	**2.29E+00**
Xe-135	Ci	6.26E+00	1.04E+00	2.33E-02	9.34E-02	**7.42E+00**
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Others (specify)	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
D. Iodine Releases						
I-131	Ci	0.00	0.00	0.00	0.00	**0.00**
I-132	Ci	0.00	0.00	0.00	0.00	**0.00**
I-133	Ci	0.00	0.00	0.00	0.00	**0.00**
I-134	Ci	0.00	0.00	0.00	0.00	**0.00**
I-135	Ci	0.00	0.00	0.00	0.00	**0.00**
Others (specify)	Ci	0.00	0.00	0.00	0.00	**0.00**

BRAIDWOOD NUCLEAR POWER STATION
SEMI-ANNUAL EFFLUENT REPORT FOR 1994
GAS RELEASES
UNIT 1 (Docket Number 50-456)
CONTINUOUS MODE

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
A. Particulate (> 8 day half-life) Releases						
Mn-54	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Co-58	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Co-60	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-89	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-90	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Zr-95	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ru-103	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Cs-134	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Cs-137	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ba\La-140	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Others (Specify)	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
B. Tritium Releases						
1. Total Release Activity	Ci	1.47E-02	1.12E+00	6.94E-01	4.62E+00	**6.45E+00**
C. Fission and Activation Gas Releases						
Ar-41	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-85	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-85m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-87	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-131m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-133	Ci	1.71E+01	2.32E+00	1.60E+00	1.13E+00	**2.22E+01**
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-135	Ci	4.14E+00	<LLD	<LLD	<LLD	**4.14E+00**
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Others (specify)	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
D. Iodine Releases						
I-131	Ci	5.89E-05	1.55E-04	9.64E-07	<LLD	**2.15E-04**
I-132	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
I-133	Ci	1.82E-06	1.72E-05	<LLD	<LLD	**1.90E-05**
I-134	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
I-135	Ci	<LLD	1.61E-05	<LLD	<LLD	**1.61E-05**
Others (specify)	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**

BRAIDWOOD NUCLEAR POWER STATION
SEMI-ANNUAL EFFLUENT REPORT FOR 1994
GAS RELEASES
UNIT 2 (Docket Number 50-457)
SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	**Total**
A. Fission and Activation Gas Releases						
1. Total Release Activity	Ci	8.30E+02	4.51E+02	1.18E+00	6.79E-01	**1.28E+03**
2. Average Release Rate	uCi/sec	1.05E+02	5.72E+01	1.50E-01	8.61E-02	**4.06E+01**
B. Iodine Releases						
1. Total I-131 Activity	Ci	1.75E-03	1.87E-03	8.20E-07	1.64E-05	**3.64E-03**
2. Average Release Rate	uCi/sec	2.22E-04	2.37E-04	1.04E-07	2.08E-06	**1.15E-04**
C. Particulate (> 8 day half-life) Releases						
1. Gross Activity	Ci	2.36E-12	<LLD	<LLD	<LLD	**2.36E-12**
2. Average Release Rate	uCi/sec	2.99E-13	<LLD	<LLD	<LLD	**7.48E-14**
3. Gross Alpha Activity	Ci	<LLD	5.06E-07	2.42E-08	<LLD	**5.30E-07**
D. Tritium Releases						
1. Total Release Activity	Ci	3.19E+00	8.40E+00	6.88E+00	8.30E+00	**2.68E+01**
2. Average Release Rate	uCi/sec	4.05E-01	1.07E+00	8.73E-01	1.05E+00	**8.50E-01**
E. Sum of Iodine, Particulate (> 8 day half-life), and Tritium Releases.						
1. Total Release Activity	Ci	3.19E+00	8.40E+00	6.88E+00	8.30E+00	**2.68E+01**

Note: LLD Values are included in Appendix A of this report.

Note: % Limit Values are included in Appendix B of this report.

BRAIDWOOD NUCLEAR POWER STATION
SEMI-ANNUAL EFFLUENT REPORT FOR 1994
GAS RELEASES
UNIT 2 (Docket Number 50-457)
BATCH MODE

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
A. Particulate (> 8 day half-life) Releases						
Mn-54	Ci	0.00	0.00	0.00	0.00	**0.00**
Co-58	Ci	0.00	0.00	0.00	0.00	**0.00**
Fe-59	Ci	0.00	0.00	0.00	0.00	**0.00**
Co-60	Ci	0.00	0.00	0.00	0.00	**0.00**
Sr-89	Ci	0.00	0.00	0.00	0.00	**0.00**
Sr-90	Ci	0.00	0.00	0.00	0.00	**0.00**
Zr-95	Ci	0.00	0.00	0.00	0.00	**0.00**
Ru-103	Ci	0.00	0.00	0.00	0.00	**0.00**
Cs-134	Ci	0.00	0.00	0.00	0.00	**0.00**
Cs-137	Ci	0.00	0.00	0.00	0.00	**0.00**
Ba\La-140	Ci	0.00	0.00	0.00	0.00	**0.00**
Ce-144	Ci	0.00	0.00	0.00	0.00	**0.00**
Others (Specify)						
B. Tritium Releases						
1. Total Release Activity	Ci	2.71E-01	8.00E+00	4.09E-02	4.81E-01	**8.79E+00**
C. Fission and Activation Gas Releases						
Ar-41	Ci	4.63E-02	2.42E-02	6.99E-02	2.43E-02	**1.65E-01**
Kr-85	Ci	1.66E+00	1.34E+00	<LLD	<LLD	**3.00E+00**
Kr-85m	Ci	9.19E-02	1.09E-01	4.71E-04	1.94E-04	**2.02E-01**
Kr-87	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-88	Ci	4.36E-02	5.06E-03	<LLD	<LLD	**4.87E-02**
Xe-131m	Ci	3.43E+00	5.61E+00	2.09E-03	2.50E-04	**9.04E+00**
Xe-133	Ci	3.73E+02	3.41E+02	1.07E+00	6.40E-01	**7.16E+02**
Xe-133m	Ci	3.38E+00	1.39E+00	1.96E-03	3.05E-03	**4.78E+00**
Xe-135	Ci	2.34E+00	1.14E+00	3.64E-02	1.22E-02	**3.53E+00**
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Others (specify)						
D. Iodine Releases						
I-131	Ci	6.23E-08	0.00	0.00	0.00	**6.23E-08**
I-132	Ci	0.00	0.00	0.00	0.00	**0.00**
I-133	Ci	1.10E-08	0.00	0.00	0.00	**1.10E-08**
I-134	Ci	0.00	0.00	0.00	0.00	**0.00**
I-135	Ci	0.00	0.00	0.00	0.00	**0.00**
Others (specify)						

BRAIDWOOD NUCLEAR POWER STATION
SEMI-ANNUAL EFFLUENT REPORT FOR 1994
GAS RELEASES
UNIT 2 (Docket Number 50-457)
CONTINUOUS MODE

Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total

A. Particulate (> 8 day half-life) Releases

Mn-54	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Co-58	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Co-60	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-89	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Sr-90	Ci	2.36E-12	<LLD	<LLD	<LLD	**2.36E-12**
Zr-95	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ru-103	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Cs-134	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Cs-137	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ba\La-140	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Others (Specify)						

B. Tritium Releases

1. Total Release Activity	Ci	2.92E+00	4.02E-01	6.84E+00	7.82E+00	**1.80E+01**

C. Fission and Activation Gas Releases

Ar-41	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-85	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-85m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-87	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-131m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-133	Ci	4.22E+02	9.75E+01	<LLD	<LLD	**5.20E+02**
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-135	Ci	2.40E+01	2.43E+00	<LLD	<LLD	**2.64E+01**
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Others (specify)						

D. Iodine Releases

I-131	Ci	1.75E-03	1.87E-03	8.20E-07	1.64E-05	**3.64E-03**
I-132	Ci	7.76E-06	<LLD	<LLD	<LLD	**7.76E-06**
I-133	Ci	2.48E-04	3.88E-05	<LLD	3.05E-05	**3.17E-04**
I-134	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
I-135	Ci	<LLD	<LLD	<LLD	<LLD	**<LLD**
Others (specify)						