

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



April 27, 2000
BW000048

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Braidwood Station, Units 1 and 2
Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. STN 50-456 and STN 50-457

Subject: 1999 Radioactive Effluent Release Report

The attached document includes the Radioactive Effluent Release Report for Braidwood Station. This report is being submitted in accordance with 10 CFR 50.36a, "Technical specifications on effluents from nuclear power reactors," and Technical Specification 5.6.3, "Radioactive Effluent Release Report," and includes a summary of radiological liquid and gaseous effluents and solid waste released from the site from January 1999 through December 1999.

If you have any questions regarding this information, please contact Mr. T. W. Simpkin, Regulatory Assurance Manager, at (815) 458-2801, extension 2980.

Respectfully,

A handwritten signature in black ink, appearing to read "GK Schwartz for" above a larger, more stylized signature that looks like "Tulon".
Timothy J. Tulon
Site Vice President
Braidwood Station

Attachment

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Braidwood Station

TJTB

ATTACHMENT

**1999 Radioactive Effluent
Release Report for
Braidwood Station**

RADIOACTIVE EFFLUENT RELEASE REPORT

Supplemental Information

January - December 1999

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 1.5 mrem to the whole body during any calendar quarter.
- 2) Less than or equal to 5 mrem to any organ during any calendar quarter.
- 3) Less than or equal to 3 mrem to the whole body during any calendar year.
- 4) Less than or equal to 10 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.
- 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 was 0.651 MeV for Unit 1 and 0.195 MeV for Unit 2. The average beta energy for Braidwood noble gas waste streams was 0.279 MeV for Unit 1 and 0.145 MeV for Unit 2.

4. Measurements and Approximations of Total Radioactivity

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

Containment batch releases are analyzed for noble gas and tritium before being discharged by gamma isotopic and scintillation, respectively. Gaseous decay tanks are analyzed for noble gas before being discharged by gamma isotopic. Released activity is normally calculated using volume of release, which is determined by change in tank or containment pressure.

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. The particulate samples are also analyzed quarterly for gross alpha and SR-89/90. Noble gas and tritium grab samples are pulled and analyzed weekly by gamma isotopic and scintillation, respectively. 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 for tritium. A representative portion of this sample is 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 analysis. Circulating Water Blowdown, Condensate Polisher Sump and Waste Water Treatment are analyzed weekly by gamma isotopic and for tritium. These weekly samples 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 volume of 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
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
GAS RELEASES
UNIT 1 (Docket Number 50-456)
SUMMATION OF ALL RELEASES

Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
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A. Fission and Activation Gas Releases

1. Total Release Activity	Ci	9.40E-02	1.21E-01	1.74E-01	2.32E-01	6.21E-01
2. Average Release Rate	uCi/sec	1.21E-02	1.54E-02	2.19E-02	2.92E-02	7.86E-02

B. Iodine Releases

1. Total I-131 Activity	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
2. Average Release Rate	uCi/sec	<LLD	<LLD	<LLD	<LLD	<LLD

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

1. Gross Activity	Ci	<LLD	8.87E-06	<LLD	<LLD	8.87E-06
2. Average Release Rate	uCi/sec	<LLD	2.96E-06	<LLD	<LLD	2.96E-06
3. Gross Alpha Activity	Ci	<LLD	<LLD	<LLD	1.00E-11	1.00E-11

D. Tritium Releases

1. Total Release Activity	Ci	2.76E+00	1.28E+01	2.79E+00	4.07E+00	2.24E+01
2. Average Release Rate	uCi/sec	3.55E-01	1.63E+00	3.51E-01	5.12E-01	2.85E+00

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

1. Total Release Activity	Ci	2.76E+00	1.28E+01	2.79E+00	4.07E+00	2.24E+01
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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
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
GAS RELEASES
UNIT 1 (Docket Number 50-456)
BATCH MODE

Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
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A. Particulate (> 8 day half-life) Releases

Cr-51	Ci	*	*	*	*	*
Mn-54	Ci	*	*	*	*	*
Co-57	Ci	*	*	*	*	*
Co-58	Ci	*	*	*	*	*
Fe-59	Ci	*	*	*	*	*
Co-60	Ci	*	*	*	*	*
Sr-89	Ci	*	*	*	*	*
Sr-90	Ci	*	*	*	*	*
Sn-117m	Ci	*	*	*	*	*
Cs-134	Ci	*	*	*	*	*
Cs-137	Ci	*	*	*	*	*
Ba-La-140	Ci	*	*	*	*	*
Ce-141	Ci	*	*	*	*	*
Ce-144	Ci	*	*	*	*	*

* Value reported as Continuous Mode

B. Tritium Releases

1. Total Release Activity	Ci	1.76E-01	2.50E-01	7.18E-01	7.23E-01	1.87E+00
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C. Fission and Activation Gas Releases

Ar-41	Ci	6.75E-02	6.35E-02	7.70E-02	9.52E-02	3.03E-01
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	2.65E-02	4.94E-02	3.48E-02	4.12E-02	1.52E-01
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	Ci	<LLD	1.73E-04	9.52E-05	5.13E-04	7.81E-04
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD	<LLD

D. Iodine Releases

I-131	Ci	*	*	*	*	*
I-132	Ci	*	*	*	*	*
I-133	Ci	*	*	*	*	*
I-134	Ci	*	*	*	*	*
I-135	Ci	*	*	*	*	*

* Value reported as Continuous Mode

BRAIDWOOD NUCLEAR POWER STATION
 RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
 GAS RELEASES
 UNIT 1 (Docket Number 50-456)
 CONTINUOUS MODE

Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
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A. Particulate (> 8 day half-life) Releases

Cr-51	Ci	<LLD	<LLD	<LLD	<LLD
Mn-54	Ci	<LLD	<LLD	<LLD	<LLD
Co-57	Ci	<LLD	<LLD	<LLD	<LLD
Co-58	Ci	<LLD	<LLD	<LLD	<LLD
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD
Co-60	Ci	<LLD	<LLD	<LLD	<LLD
Sr-89	Ci	<LLD	<LLD	<LLD	<LLD
Sr-90	Ci	<LLD	<LLD	<LLD	<LLD
Sn-117m	Ci	<LLD	1.20E-06	<LLD	<LLD
Cs-134	Ci	<LLD	<LLD	<LLD	<LLD
Cs-137	Ci	<LLD	<LLD	<LLD	<LLD
Ba\La-140	Ci	<LLD	<LLD	<LLD	<LLD
Ce-141	Ci	<LLD	<LLD	<LLD	<LLD
Ce-144	Ci	<LLD	7.67E-06	<LLD	<LLD

B. Tritium Releases

1. Total Release Activity	Ci	2.58E+00	1.26E+01	2.06E+00	3.35E+00	2.06E+01
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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	<LLD	7.71E-03	6.20E-02	9.53E-02	1.65E-01
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD	<LLD

D. Iodine Releases

I-131	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-132	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-133	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-134	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
GAS RELEASES
UNIT 2 (Docket Number 50-457)
SUMMATION OF ALL RELEASES

Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
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A. Fission and Activation Gas Releases

1. Total Release Activity	Ci	1.74E+00	8.81E-02	7.70E-02	1.54E-01	2.06E+00
2. Average Release Rate	uCi/sec	2.24E-01	1.12E-02	9.69E-03	1.94E-02	2.64E-01

B. Iodine Releases

1. Total I-131 Activity	Ci	<LLD	1.70E-05	<LLD	<LLD	1.70E-05
2. Average Release Rate	uCi/sec	<LLD	2.16E-06	<LLD	<LLD	2.16E-06

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

1. Gross Activity	Ci	<LLD	2.48E-06	<LLD	1.29E-07	2.61E-06
2. Average Release Rate	uCi/sec	<LLD	3.15E-07	<LLD	1.62E-08	3.31E-07
3. Gross Alpha Activity	Ci	<LLD	<LLD	<LLD	2.97E-12	2.97E-12

D. Tritium Releases

1. Total Release Activity	Ci	6.74E+01	3.53E+00	3.43E+00	4.63E+00	7.90E+01
2. Average Release Rate	uCi/sec	8.67E+00	4.48E-01	4.33E-01	5.81E-01	1.01E+01

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

1. Total Release Activity	Ci	6.74E+01	3.53E+00	3.43E+00	4.63E+00	7.90E+01
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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
 RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
 GAS RELEASES
 UNIT 2 (Docket Number 50-457)
 BATCH MODE

Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
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A. Particulate (> 8 day half-life) Releases

Cr-51	Ci	*	*	*	*	*
Mn-54	Ci	*	*	*	*	*
Co-57	Ci	*	*	*	*	*
Co-58	Ci	*	*	*	*	*
Fe-59	Ci	*	*	*	*	*
Co-60	Ci	*	*	*	*	*
Sr-89	Ci	*	*	*	*	*
Sr-90	Ci	*	*	*	*	*
Sn-117m	Ci	*	*	*	*	*
Cs-134	Ci	*	*	*	*	*
Cs-137	Ci	*	*	*	*	*
Ba/La-140	Ci	*	*	*	*	*
Ce-141	Ci	*	*	*	*	*
Ce-144	Ci	*	*	*	*	*

* Value reported as Continuous Mode

B. Tritium Releases

I. Total Release Activity	Ci	2.61E-02	5.88E-02	2.02E-01	4.78E-01	7.65E-01
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C. Fission and Activation Gas Releases

Ar-41	Ci	1.07E-01	3.66E-02	4.89E-02	5.57E-02	2.48E-01
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	1.76E-03	1.76E-03
Xe-133	Ci	6.11E-02	4.80E-02	2.67E-02	5.08E-02	1.87E-01
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	Ci	4.82E-03	3.52E-03	1.40E-03	4.05E-03	1.38E-02
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD	<LLD

D. Iodine Releases

I-131	*	*	*	*	*	*
I-132	*	*	*	*	*	*
I-133	*	*	*	*	*	*
I-134	*	*	*	*	*	*
I-135	*	*	*	*	*	*

* Value reported as Continuous Mode

BRAIDWOOD NUCLEAR POWER STATION
 RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
 GAS RELEASES
 UNIT 2 (Docket Number 50-457)
 CONTINUOUS MODE

Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
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A. Particulate (> 8 day half-life) Releases

Cr-51	Ci	<LLD	<LLD	<LLD	<LLD
Mn-54	Ci	<LLD	<LLD	<LLD	<LLD
Co-57	Ci	<LLD	<LLD	<LLD	1.29E-07
Co-58	Ci	<LLD	<LLD	<LLD	<LLD
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD
Co-60	Ci	<LLD	<LLD	<LLD	<LLD
Sr-89	Ci	<LLD	<LLD	<LLD	<LLD
Sr-90	Ci	<LLD	<LLD	<LLD	<LLD
Sn-117m	Ci	<LLD	2.48E-06	<LLD	<LLD
Cs-134	Ci	<LLD	<LLD	<LLD	<LLD
Cs-137	Ci	<LLD	<LLD	<LLD	<LLD
Ba\La-140	Ci	<LLD	<LLD	<LLD	<LLD
Ce-141	Ci	<LLD	<LLD	<LLD	<LLD
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD

B. Tritium Releases

1. Total Release Activity	Ci	6.74E+01	3.47E+00	3.23E+00	4.15E+00	7.83E+01
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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	1.57E+00	<LLD	<LLD	4.19E-02	1.61E+00
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD	<LLD

D. Iodine Releases

I-131	Ci	<LLD	1.70E-05	<LLD	<LLD	1.70E-05
I-132	Ci	<LLD	1.08E-04	<LLD	<LLD	1.08E-04
I-133	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-134	Ci	<LLD	1.57E-06	<LLD	<LLD	1.57E-06
I-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
LIQUID RELEASES
UNIT 1 (Docket Number 50-456)
SUMMATION OF ALL RELEASES

Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
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A. Fission and Activation Products

1. Total Activity Released	Ci	2.11E-02	2.01E-01	1.70E-02	7.95E-02	3.19E-01
2. Average Concentration Released	uCi/ml	9.54E-09	2.24E-07	8.54E-09	4.37E-08	4.61E-08

B. Tritium

1. Total Activity Released	Ci	5.17E+02	2.12E+02	1.92E+02	2.23E+02	1.14E+03
2. Average Concentration Released	uCi/ml	2.34E-04	2.36E-04	9.64E-05	1.22E-04	1.65E-04
3. % of Limit (1E-3 uCi/ml)	%	2.34E+01	2.36E+01	9.64E+00	1.22E+01	1.65E+01

C. Dissolved Noble Gases

1. Total Activity Released	Ci	3.45E-03	3.47E-03	1.75E-05	8.60E-05	7.02E-03
2. Average Concentration Released	uCi/ml	1.56E-09	3.87E-09	8.79E-12	4.72E-11	1.01E-09
3. % of Limit (2E-4 uCi/ml)	%	7.80E-04	1.94E-03	4.40E-06	2.36E-05	5.05E-04

D. Gross Alpha

1. Total Activity Released	Ci	<LLD	6.10E-05	2.31E-05	<LLD	8.41E-05
2. Average Concentration Released	uCi/ml	<LLD	3.40E-11	5.80E-12	<LLD	1.21E-11

E. Volume of Releases

1. Volume of Liquid Waste to Discharge	liters	1.58E+06	2.28E+06	1.75E+06	1.15E+06	6.76E+06
2. Volume of Dilution Water	liters	2.21E+09	8.95E+08	1.99E+09	1.82E+09	6.92E+09

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

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

Note: Waste water treatment compositer (continuous sample point)
found unplugged during shifly check on 12-12-1999. Grab sampling performed.

BRAIDWOOD NUCLEAR POWER STATION
 RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
 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	3.39E+02	1.98E+02	1.32E+02	1.70E+02	8.39E+02
Na-24	Ci	1.83E-05	1.62E-03	<LLD	7.55E-05	1.71E-03
Cr-51	Ci	<LLD	5.50E-03	<LLD	<LLD	5.50E-03
Mn-54	Ci	6.00E-05	6.90E-04	3.01E-05	4.92E-06	7.85E-04
Fe-55	Ci	1.64E-03	<LLD	<LLD	<LLD	1.64E-03
Co-57	Ci	4.66E-05	2.22E-04	<LLD	<LLD	2.69E-04
Co-58	Ci	1.21E-02	9.30E-02	3.05E-03	8.80E-04	1.09E-01
Fe-59	Ci	<LLD	2.02E-04	1.08E-08	<LLD	2.02E-04
Co-60	Ci	1.93E-03	3.98E-03	1.10E-03	7.40E-04	7.75E-03
Zn-65	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
As-76	Ci	<LLD	<LLD	7.45E-06	<LLD	7.45E-06
Kr-85	Ci	<LLD	1.14E-03	<LLD	<LLD	1.14E-03
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-89	Ci	<LLD	<LLD	<LLD	1.44E-03	1.44E-03
Sr-90	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-92	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Nb-95	Ci	2.45E-06	4.74E-04	<LLD	<LLD	4.76E-04
Zr-95	Ci	<LLD	1.48E-04	2.81E-05	<LLD	1.76E-04
Zr-97	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Nb-97	Ci	2.96E-06	<LLD	<LLD	<LLD	2.96E-06
Mo-99	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Tc-99m	Ci	1.91E-06	<LLD	<LLD	<LLD	1.91E-06
Ru-105	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Ag-110m	Ci	<LLD	<LLD	<LLD	9.05E-06	9.05E-06
Sn-113	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Sn-117m	Ci	3.87E-05	2.48E-02	9.75E-03	2.23E-03	3.68E-02
Sb-122	Ci	<LLD	1.10E-02	<LLD	<LLD	1.10E-02
Sb-124	Ci	2.74E-03	5.80E-02	1.28E-03	4.54E-03	6.66E-02
Sb-125	Ci	1.02E-03	1.08E-03	3.62E-05	1.08E-03	3.22E-03
Te-125m	Ci	8.95E-04	<LLD	<LLD	<LLD	8.95E-04
Sb-126	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-131	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-132	Ci	<LLD	2.62E-05	<LLD	<LLD	2.62E-05
Te-132	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-133	Ci	<LLD	<LLD	<LLD	3.89E-05	3.89E-05
Xe-133	Ci	3.39E-03	2.18E-03	1.75E-05	8.60E-05	5.67E-03
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-134	Ci	1.17E-04	<LLD	4.42E-06	<LLD	1.21E-04
Xe-135	Ci	5.80E-05	1.51E-04	<LLD	<LLD	2.09E-04
Cs-137	Ci	4.73E-04	6.00E-06	1.46E-05	5.60E-06	4.99E-04
Cs-138	Ci	<LLD	1.81E-05	<LLD	<LLD	1.81E-05
Ba\La-140	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Hf-181	Ci	<LLD	<LLD	3.52E-06	<LLD	3.52E-06
W-187	Ci	<LLD	<LLD	<LLD	<LLD	<LLD

BRAIDWOOD NUCLEAR POWER STATION
 RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
 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	1.78E+02	1.38E+01	5.95E+01	5.25E+01	3.04E+02
Na-24	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	<LLD	2.34E-03	2.34E-03
Co-57	Ci	<LLD	<LLD	<LLD	3.45E-06	3.45E-06
Co-58	Ci	<LLD	<LLD	<LLD	1.55E-02	1.55E-02
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Co-60	Ci	<LLD	<LLD	<LLD	4.82E-02	4.82E-02
Zn-65	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
As-76	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85	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
Nb-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	1.65E-03	2.63E-03	4.28E-03
Sb-122	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Sb-124	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Sb-125	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Te-125m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Sb-126	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-131	Ci	<LLD	3.51E-05	<LLD	<LLD	3.51E-05
Xe-131m	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
Cs-137	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-138	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
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
LIQUID RELEASES
UNIT 2 (Docket Number 50-457)
SUMMATION OF ALL RELEASES

Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
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A. Fission and Activation Products

1. Total Activity Released	Ci	2.11E-02	2.01E-01	1.70E-02	7.95E-02	3.19E-01
2. Average Concentration Released	uCi/ml	9.54E-09	2.24E-07	8.54E-09	4.37E-08	4.61E-08

B. Tritium

1. Total Activity Released	Ci	5.17E+02	2.12E+02	1.92E+02	2.23E+02	1.14E+03
2. Average Concentration Released	uCi/ml	2.34E-04	2.36E-04	9.64E-05	1.22E-04	1.65E-04
3. % of Limit (1E-3 uCi/ml)	%	2.34E+01	2.36E+01	9.64E+00	1.22E+01	1.65E+01

C. Dissolved Noble Gases

1. Total Activity Released	Ci	3.45E-03	3.47E-03	1.75E-05	8.60E-05	7.02E-03
2. Average Concentration Released	uCi/ml	1.56E-09	3.87E-09	8.79E-12	4.72E-11	1.01E-09
3. % of Limit (2E-4 uCi/ml)	%	7.80E-04	1.94E-03	4.40E-06	2.36E-05	5.05E-04

D. Gross Alpha

1. Total Activity Released	Ci	<LLD	6.10E-05	2.31E-05	<LLD	8.41E-05
2. Average Concentration Released	uCi/ml	<LLD	3.40E-11	5.80E-12	<LLD	1.21E-11

E. Volume of Releases

1. Volume of Liquid Waste to Discharge	liters	1.58E+06	2.28E+06	1.75E+06	1.15E+06	6.76E+06
2. Volume of Dilution Water	liters	2.21E+09	8.95E+08	1.99E+09	1.82E+09	6.92E+09

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

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

Note: Waste water treatment compositor (continuous sample point)
 found unplugged during shifly check on 12-12-1999. Grab sampling performed.

BRAIDWOOD NUCLEAR POWER STATION
 RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
 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	3.39E+02	1.98E+02	1.32E+02	1.70E+02	8.39E+02
Na-24	Ci	1.83E-05	1.62E-03	<LLD	7.55E-05	1.71E-03
Cr-51	Ci	<LLD	5.50E-03	<LLD	<LLD	5.50E-03
Mn-54	Ci	6.00E-05	6.90E-04	3.01E-05	4.92E-06	7.85E-04
Fe-55	Ci	1.64E-03	<LLD	<LLD	<LLD	1.64E-03
Co-57	Ci	4.66E-05	2.22E-04	<LLD	<LLD	2.69E-04
Co-58	Ci	1.21E-02	9.30E-02	3.05E-03	8.80E-04	1.09E-01
Fe-59	Ci	<LLD	2.02E-04	1.08E-08	<LLD	2.02E-04
Co-60	Ci	1.93E-03	3.98E-03	1.10E-03	7.40E-04	7.75E-03
Zn-65	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
As-76	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85	Ci	<LLD	1.14E-03	<LLD	<LLD	1.14E-03
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-89	Ci	<LLD	<LLD	<LLD	1.44E-03	1.44E-03
Sr-90	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-92	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Nb-95	Ci	2.45E-06	4.74E-04	<LLD	<LLD	4.76E-04
Zr-95	Ci	<LLD	1.48E-04	2.81E-05	<LLD	1.76E-04
Zr-97	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Nb-97	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Mo-99	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Tc-99m	Ci	1.91E-06	<LLD	<LLD	<LLD	1.91E-06
Ru-105	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Ag-110m	Ci	<LLD	<LLD	<LLD	9.05E-06	9.05E-06
Sn-113	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Sn-117m	Ci	3.87E-05	2.48E-02	9.75E-03	2.23E-03	3.68E-02
Sb-122	Ci	<LLD	1.10E-02	<LLD	<LLD	1.10E-02
Sb-124	Ci	2.74E-03	5.80E-02	1.28E-03	4.54E-03	6.66E-02
Sb-125	Ci	1.02E-03	1.08E-03	3.62E-05	1.08E-03	3.22E-03
Te-125m	Ci	8.95E-04	<LLD	<LLD	<LLD	8.95E-04
Sb-126	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-131	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-132	Ci	<LLD	2.62E-05	<LLD	<LLD	2.62E-05
Te-132	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-133	Ci	<LLD	<LLD	<LLD	3.89E-05	3.89E-05
Xe-133	Ci	3.39E-03	2.18E-03	1.75E-05	8.60E-05	5.67E-03
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-134	Ci	1.17E-04	<LLD	4.42E-06	<LLD	1.21E-04
Xe-135	Ci	5.80E-05	1.51E-04	<LLD	<LLD	2.09E-04
Cs-137	Ci	4.73E-04	6.00E-06	1.46E-05	5.60E-06	4.99E-04
Cs-138	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	3.52E-06	<LLD	3.52E-06
W-187	Ci	<LLD	<LLD	<LLD	<LLD	<LLD

BRAIDWOOD NUCLEAR POWER STATION
 RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
 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	1.78E+02	1.38E+01	5.95E+01	5.25E+01	3.04E+02
Na-24	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	<LLD	2.34E-03	2.34E-03
Co-57	Ci	<LLD	<LLD	<LLD	3.45E-06	3.45E-06
Co-58	Ci	<LLD	<LLD	<LLD	1.55E-02	1.55E-02
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Co-60	Ci	<LLD	<LLD	<LLD	4.82E-02	4.82E-02
Zn-65	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
As-76	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85	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
Nb-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	1.65E-03	2.63E-03	4.28E-03
Sb-122	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Sb-124	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Sb-125	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Te-125m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Sb-126	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
I-131	Ci	<LLD	3.51E-05	<LLD	<LLD	3.51E-05
Xe-131m	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
Cs-137	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-138	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
BaLa-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
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
SOLID RADIOACTIVE WASTE
UNIT 1 AND 2 COMBINED (Docket Numbers 50-456 and 50-457)**

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL

1. Types of Waste

		1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Year Total
a. PROCESS WASTE	Total (m3)	1.65E+01	8.81E+01	5.39E+01	1.06E+02	2.64E+02
	Total(Ci)	1.97E+01	4.56E+00	7.01E-01	9.55E+00	3.45E+01
	Est. Total Error %	3.21E+00	3.69E+00	2.66E+00	2.99E+00	2.87E+00
b. DRY ACTIVE WASTE	Total (m3)	1.53E+02	7.65E+01	0.00E+00	1.85E+02	4.14E+02
	Total (Ci)	1.53E-01	2.19E-02	0.00E+00	4.30E-01	6.05E-01
	Est. Total Error %	2.27E+00	3.35E+00	N/A	2.26E+00	2.17E+00

NOTE: Volume of Dry Active Waste is before vendor volume reduction.

2. Estimate of major nuclide composition (by type of waste)

a.

PROCESS WASTE

	1st Qtr Ci	2nd Qtr Ci	3rd Qtr Ci	4th Qtr Ci	Yr total Ci	% Composition
*FE55	1.08E+01	5.10E-01	2.75E-01	4.13E+00	1.57E+01	4.54E+01
*NI63	2.84E+00	1.85E-01	1.50E-01	2.61E+00	5.79E+00	1.68E+01
CO58	2.63E+00	3.04E+00	2.45E-03	8.74E-03	5.68E+00	1.64E+01
CO60	2.77E+00	1.87E-01	1.27E-01	2.05E+00	5.12E+00	1.48E+01
MN54	2.47E-01	6.62E-02	5.18E-03	1.18E-01	4.37E-01	1.26E+00
SB124	0.00E+00	4.29E-01	0.00E+00	0.00E+00	4.29E-01	1.24E+00
H3	4.57E-02	6.60E-02	6.92E-02	9.93E-02	2.80E-01	8.11E-01
*C14	7.03E-02	1.08E-02	9.90E-03	1.73E-01	2.64E-01	7.66E-01
CS137	2.83E-02	2.86E-03	3.44E-02	1.80E-01	2.46E-01	7.12E-01

*Activities based on 10CFR61 scaling factors.

b.

DRY ACTIVE
WASTE

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Yr total	% Composition
	Ci	Ci	Ci	Ci	Ci	
CO58	2.83E-02	3.85E-03	0.00E+00	1.33E-01	1.66E-01	2.74E+01
*FE55	3.83E-02	8.73E-04	0.00E+00	7.12E-02	1.10E-01	1.82E+01
H3	3.87E-02	1.28E-02	0.00E+00	4.57E-02	9.72E-02	1.61E+01
CR51	1.80E-03	2.40E-03	0.00E+00	7.34E-02	7.76E-02	1.28E+01
*NI63	1.18E-02	3.14E-04	0.00E+00	2.97E-02	4.18E-02	6.91E+00
CO60	1.22E-02	3.18E-04	0.00E+00	2.87E-02	4.12E-02	6.82E+00
NB95	8.43E-03	2.69E-04	0.00E+00	9.40E-03	1.81E-02	2.99E+00
SB124	0.00E+00	4.67E-04	0.00E+00	1.51E-02	1.56E-02	2.57E+00
ZR95	5.38E-03	1.97E-04	0.00E+00	6.96E-03	1.25E-02	2.07E+00
MN54	3.41E-03	8.78E-05	0.00E+00	4.57E-03	8.07E-03	1.33E+00
FE59	2.90E-04	1.31E-04	0.00E+00	4.16E-03	4.58E-03	7.58E-01
CS137	8.64E-04	4.16E-05	0.00E+00	1.59E-03	2.50E-03	4.13E-01
*C14	3.80E-04	1.83E-05	0.00E+00	1.95E-03	2.35E-03	3.89E-01
SB125	9.08E-04	0.00E+00	0.00E+00	6.55E-04	1.56E-03	2.58E-01
SB122	0.00E+00	1.06E-04	0.00E+00	1.29E-03	1.40E-03	2.31E-01
CO57	9.08E-04	1.01E-05	0.00E+00	4.72E-04	1.39E-03	2.30E-01
SN113	3.98E-04	1.77E-05	0.00E+00	6.43E-04	1.06E-03	1.75E-01
*NI59	4.56E-04	3.57E-06	0.00E+00	3.32E-04	7.92E-04	1.31E-01

*Activities based on 10CFR61 scaling factors.

Number of Shipments: 18

Mode of Transportation: Exclusive Use Vehicle

Destination: American Ecology Recycle Center, Oak Ridge, Tennessee (8);
GTS Duratek, Oak Ridge, Tennessee (1);
Allied Technology Group, Richland, Washington (6);
Allied Technology Group, Catalytics, Oak Ridge, Tennessee (1);
Hake, Memphis, Tennessee (1);
Molten Metal, Oak Ridge, Tennessee (1)

B. IRRADIATED FUEL SHIPMENTS

No irradiated fuel shipments for January through December, 1999

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
SOLID RADIOACTIVE WASTE
UNIT 1 AND 2 COMBINED (Docket Numbers 50-456 and 50-457)

Shipment Number	Waste Class	Type of Container	Solidification Agent or Absorbent
RWS99-001	AS	STC	None
RWS99-002	AS	STC	None
RWS99-003	AU	STC	None
RWS99-004	AS	STC	None
RWS99-005	AU	STC	None
RWS99-006	AS	STC	None
RWS99-007	AU	STC	None
RWS99-008	AU	STC	None
RWS99-009	AS	STC	None
RWS99-010	AU	STC	None
RWS99-011	AU	STC	None
RWS99-012	AU	STC	None
RWS99-013	AU	STC	None
RWS99-014	AU	STC	None
RWS99-015	AS	STC	None
RWS99-016	AU	STC	None
RWS99-017	AU	STC	None
RWS99-018	AU	STC	None

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
UNIT 1 AND 2 COMBINED (Docket Numbers 50-456 and 50-457)

1. There were no changes to the Braidwood Station Process Control Program in 1999.
2. There were no changes to the installed liquid, gaseous, or solid radwaste treatment systems in 1999.
3. There were no liquid holdup tanks or gas decay tanks which exceeded the limits addressed in the ODCM-RETS.
4. Pursuant to ODCM-RETS Section 12.6.2, 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 ODCM-RETS:

At 0826 on March 19, 1999, Process Radiation Monitor 2PR30J, Unit 2 Auxiliary Building Vent Stack Wide Range Gas Monitor, was declared inoperable and removed from operation due to a failed vacuum pump. The appropriate Technical Requirements Manual (TRM 3.3.i) was entered. At 1700 on March 28, 1999, the pump had satisfactorily been replaced and the monitor was returned to operable status.

The cause of exceeding the 7-day requirement was due to faulty Thomas vacuum pumps installed on the radiation monitor. Three new pumps were installed over a period of 4 days, and all three pumps failed with less than 24 hours of run time. While preparing a fourth pump for installation, a misalignment of the diaphragm was noted. The diaphragm was not lining up correctly with the rocker arm, this resulted in a leak in the diaphragm which wouldn't allow the pump to meet its flow requirements to complete the operability calibration. This misalignment was corrected.

Engineering and maintenance performed a root cause on the pumps to determine why the failures were occurring. It was apparent that the diaphragm was not sealing and holding vacuum. Upon further evaluation it was determined that the rocker arm was not hitting the diaphragm flush. After a few hours the diaphragm began to wear unevenly, this was causing air to leak by. The shavings from the diaphragm were then deposited in the pump and the sample line, eventually the check valve in the sample line began clogging up.

It was determined that a workable pump could be built with existing parts from the three pumps that had already failed. Once this was completed Materials Management performed a parts evaluation verifying that the rebuilt pump would qualify for use in the safety related radiation monitor. The pump was then installed and successfully tested per maintenance and engineering.

5. Error in Measurement -

The following is an estimate of the errors associated with effluent monitoring and analysis. The estimate is calculated using the square root of the sum of the squares methodology.

A.	<u>Gaseous Effluents</u>	<u>Est. Total Error %</u>
1.	Fission and Activation	
	Gas Releases	7.59
2.	Iodine Releases	33.2
3.	Particulates (>8 day half life)	
	Releases	19.8
4.	Tritium Releases	8.07

B.	<u>Liquid Effluents</u>	<u>Est. Total Error %</u>
1.	Fission and Activation	
	Products	2.64
2.	Tritium	5.85
3.	Dissolved Noble Gases	2.64
4.	Gross Alpha	14.7
5.	Volume of Liquid Waste	
	to Discharge	2.0
6.	Volume of Dilution Water	1.5

6. The following is a summary of the 1999 Revisions to the Commonwealth Edison Company (ComEd) Offsite Dose Calculation Manual (ODCM).

- A summary of changes along with a copy of the entire ODCM was submitted in accordance with Technical Specification 5.5.1 under separate cover.
Reference: Letter from R. M. Krich, Vice President – Regulatory Services, dated March 21, 2000,
Subject: Offsite Dose Calculation Manual changes for 1999.

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
UNIT 1 AND 2 (Docket Numbers 50-456 and 50-457)

APPENDIX A

LLD Tables

**BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
UNIT 1 AND 2 (Docket Numbers 50-456 and 50-457)
LLD VALUES FOR GASEOUS RELEASES**

<u>Isotope</u>	<u>LLD (Ci/ml)</u>
Alpha	3.25E-22
H-3	4.79E-14
Ar-41	5.61E-14
Cr-51	1.36E-17
Mn-54	5.67E-19
Co-57	9.80E-19
Co-58	5.37E-19
Fe-59	1.33E-18
Co-60	1.29E-18
Kr-85	7.42E-12
Kr-85m	3.33E-14
Kr-87	3.86E-12
Kr-88	4.41E-12
Sr-89	2.14E-21
Sr-90	5.28E-22
Mo-99	2.83E-19
Sn-117m	1.12E-18
I-131	8.88E-19
Xe-131m	2.86E-13
I-132	9.53E-16
I-133	1.23E-18
Xe-133	3.75E-12
Xe-133m	9.38E-12
Cs-134	7.02E-19
I-134	1.34E-17
I-135	4.59E-17
Xe-135	1.15E-12
Xe-135m	1.24E-11
Cs-137	6.30E-19
Xe-138	8.73E-11
Ba-La-140	5.95E-18
Ce-141	7.19E-19
Ce-144	2.63E-18

NOTE: LLD Value for total activity released is based on LLD values for Individual isotopes used in the calculation.

**BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
UNIT 1 AND 2 (Docket Numbers 50-456 and 50-457)
LLD VALUES FOR LIQUID RELEASES**

<u>Isotope</u>	<u>LLD (Ci/ml)</u>
Alpha	5.92E-14
H-3	7.69E-12
Na-24	8.54E-14
Cr-51	4.68E-13
Mn-54	1.08E-14
Fe-55	9.17E-13
Co-57	3.81E-14
Co-58	4.19E-14
Fe-59	2.98E-14
Co-60	1.67E-14
Zn-65	7.56E-14
As-76	8.45E-14
Kr-85	8.76E-11
Kr-88	1.41E-13
Sr-89	4.28E-14
Sr-90	1.38E-14
Sr-92	3.64E-14
Nb-95	6.04E-14
Zr-95	1.09E-13
Zr-97	3.54E-14
Nb-97	8.85E-14
Mo-99	1.74E-13
Tc-99m	3.55E-14
Ru-105	1.18E-13
Ag-110m	4.43E-14
Sn-113	1.77E-12
Sn-117m	4.54E-14
Sb-122	5.19E-14
Sb-124	1.16E-14
Sb-125	1.38E-13
Te-125m	1.47E-11
Sb-126	6.20E-14
I-131	6.14E-14
Xe-131m	1.56E-12
I-132	1.10E-13
Te-132	3.84E-14
I-133	5.47E-14
Xe-133	7.91E-14
Xe-133m	2.13E-13
Cs-134	3.09E-14
Xe-135	1.94E-14
Cs-137	3.34E-14
Cs-138	1.65E-13
Ba-La-140	1.88E-13
Ce-141	5.22E-14
Ce-144	1.74E-13
Hf-181	5.25E-14
W-187	1.70E-13

NOTE: LLD Value for Total Activity Released is based on LLD Values for individual isotopes used in the calculation.

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
UNIT 1 AND 2 (Docket Numbers 50-456 and 50-457)

APPENDIX B

Supplemental Information

**BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
UNIT 1 (Docket Number 50-456)**

**GASEOUS EFFLUENTS
SUPPLEMENTAL RELEASE INFORMATION**

A.	Batch Release	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
1.	Total Number of Batch Releases	45	44	45	48	182
2.	Total Time Period for Batch Releases (minutes)	1909	1923	2505	2226	8563
3.	Maximum Time Period for a Batch Release (minutes)	57	62	519	65	519
4.	Average Time Period for a Batch Release (minutes)	42.4	43.7	55.7	46.4	47.0
5.	Minimum Time Period for a Batch Release (minutes)	11	21	14	20	11
B. Abnormal Releases						
1.	Number of Releases	0	0	0	0	0
2.	Total Activity Released	0.00	0.00	0.00	0.00	0.00

**BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
UNIT 2 (Docket Number 50-457)**

**GASEOUS EFFLUENTS
SUPPLEMENTAL RELEASE INFORMATION**

A.	Batch Release	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
1.	Total Number of Batch Releases	47	47	31	33	158
2.	Total Time Period for Batch Releases (minutes)	2454	19989	1143	1224	24810
3.	Maximum Time Period for a Batch Release (minutes)	282	2673	46	50	2673
4.	Average Time Period for a Batch Release (minutes)	52.2	425.3	36.9	37.1	157.0
5.	Minimum Time Period for a Batch Release (minutes)	18	15	19	11	11
B. Abnormal Releases						0
1.	Number of Releases	0	0	0	0	0
2.	Total Activity Released	0.00	0.00	0.00	0.00	0.00

**BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
UNIT COMMON (Docket Number 50-456 and 50-457)**

**GASEOUS EFFLUENTS (WASTE GAS DECAY TANKS)
SUPPLEMENTAL RELEASE INFORMATION**

A. Batch Release	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
1. Total Number of Batch Releases	0	8	0	0	8
2. Total Time Period for Batch Releases (minutes)	0	708	0	0	708
3. Maximum Time Period for a Batch Release (minutes)	0	111	0	0	111
4. Average Time Period for a Batch Release (minutes)	0	89	0	0	89
5. Minimum Time Period for a Batch Release (minutes)	0	77	0	0	77
					0
B. Abnormal Releases					0
1. Number of Releases	0	0	0	0	0
2. Total Activity Released	0.00	0.00	0.00	0.00	0.00

**BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 1999
UNIT 1 AND 2 COMBINED (Docket Number 50-456 and 50-457)**

**LIQUID EFFLUENTS
SUPPLEMENTAL RELEASE INFORMATION**

A. Batch Release	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
1. Total Number of Batch Releases	37	51	40	27	155
2. Total Time Period for Batch Releases (minutes)	7307	10891	3710	2817	24725
3. Maximum Time Period for a Batch Release (minutes)	612	467	382	315	612
4. Average Time Period for a Batch Release (minutes)	197.5	213.5	92.7	104.3	159.5
5. Minimum Time Period for a Batch Release (minutes)	30	50	1	53	1
6. Average Stream Flow During Periods of Release of Effluent into a Flowing Stream (liters/min)	1.31E+07	1.66E+07	2.48E+06	1.94E+06	8.51E+06

BRAIDWOOD STATION UNIT ONE

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 INFANT RECEPTOR

TYPE	1ST	2ND	3RD	4TH	ANNUAL
	QUARTER	QUARTER	QUARTER	QUARTER	
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
GAMMA AIR (MRAD)	1.12E-05 (N)	1.09E-05 (N)	1.34E-05 (N)	1.68E-05 (N)	5.23E-05 (N)
BETA AIR (MRAD)	9.08E-06 (N)	9.81E-06 (N)	1.29E-05 (N)	1.67E-05 (N)	4.85E-05 (N)
TOT. BODY (MREM)	8.44E-06 (N)	8.15E-06 (N)	1.00E-05 (N)	1.25E-05 (N)	3.92E-05 (N)
SKIN (MREM)	1.56E-05 (N)	1.53E-05 (N)	1.91E-05 (N)	2.39E-05 (N)	7.39E-05 (N)
ORGAN (MREM)	5.15E-04 (N)	2.42E-03 (N)	5.24E-04 (N)	7.63E-04 (N)	4.22E-03 (N)
	LIVER	LUNG	LIVER	LIVER	LUNG
	THYROID		THYROID	THYROID	
	KIDNEY		KIDNEY	KIDNEY	
	LUNG		LUNG	LUNG	
	GI_LLI		GI_LLI	GI_LLI	

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10CFR 50 APP. I
INFANT RECEPTOR

----- % OF APP I. -----

	QTRLY	1ST QTR	2ND QTR	3RD QTR	4TH QTR	YRLY	% OF
	OBJ	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	OBJ	APP. I
GAMMA AIR (MRAD)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
BETA AIR (MRAD)	10.0	0.00	0.00	0.00	0.00	20.0	0.00
TOT. BODY (MREM)	2.5	0.00	0.00	0.00	0.00	5.0	0.00
SKIN (MREM)	7.5	0.00	0.00	0.00	0.00	15.0	0.00
ORGAN (MREM)	7.5	0.01	0.03	0.01	0.01	15.0	0.03

	LIVER	LUNG	LIVER	LIVER	LUNG
	THYROID		THYROID	THYROID	
	KIDNEY		KIDNEY	KIDNEY	
	LUNG		LUNG	LUNG	
	GI_LLI		GI_LLI	GI_LLI	

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
 ODCM SOFTWARE VERSION 1.1 January 1995
 ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT ONE

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 CHILD RECEPTOR

TYPE	1ST	2ND	3RD	4TH	ANNUAL
	QUARTER	QUARTER	QUARTER	QUARTER	
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
GAMMA AIR (MRAD)	1.12E-05 (N)	1.09E-05 (N)	1.34E-05 (N)	1.68E-05 (N)	5.23E-05 (N)
BETA AIR (MRAD)	9.08E-06 (N)	9.81E-06 (N)	1.29E-05 (N)	1.67E-05 (N)	4.85E-05 (N)
TOT. BODY (MREM)	8.44E-06 (N)	8.15E-06 (N)	1.00E-05 (N)	1.25E-05 (N)	3.92E-05 (N)
SKIN (MREM)	1.56E-05 (N)	1.53E-05 (N)	1.91E-05 (N)	2.39E-05 (N)	7.39E-05 (N)
ORGAN (MREM)	5.48E-04 (N)	8.81E-02 (N)	2.06E-02 (N)	1.95E-02 (N)	1.29E-01 (N)
	LIVER	LUNG	LIVER	LIVER	LUNG
	THYROID		THYROID	THYROID	
	KIDNEY		KIDNEY	KIDNEY	
	LUNG		LUNG	LUNG	
	GI_LLI		GI_LLI	GI_LLI	

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10CFR 50 APP. I
CHILD RECEPTOR

----- % OF APP I. -----

	QTRLY	1ST QTR	2ND QTR	3RD QTR	4TH QTR	YRLY	% OF APP. I
	OBJ	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	OBJ	
GAMMA AIR (MRAD)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
BETA AIR (MRAD)	10.0	0.00	0.00	0.00	0.00	20.0	0.00
TOT. BODY (MREM)	2.5	0.00	0.00	0.00	0.00	5.0	0.00
SKIN (MREM)	7.5	0.00	0.00	0.00	0.00	15.0	0.00
ORGAN (MREM)	7.5	0.01	1.17	0.27	0.26	15.0	0.86

	LIVER	LUNG	LIVER	LIVER	LUNG
	THYROID		THYROID	THYROID	
	KIDNEY		KIDNEY	KIDNEY	
	LUNG		LUNG	LUNG	
	GI_LLI		GI_LLI	GI_LLI	

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
 ODCM SOFTWARE VERSION 1.1 January 1995
 ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT ONE

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 TEENAGER RECEPTOR

TYPE	1ST	2ND	3RD	4TH	ANNUAL
	QUARTER	QUARTER	QUARTER	QUARTER	
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
GAMMA AIR (MRAD)	1.12E-05 (N)	1.09E-05 (N)	1.34E-05 (N)	1.68E-05 (N)	5.23E-05 (N)
BETA AIR (MRAD)	9.08E-06 (N)	9.81E-06 (N)	1.29E-05 (N)	1.67E-05 (N)	4.85E-05 (N)
TOT. BODY (MREM)	8.44E-06 (N)	8.15E-06 (N)	1.00E-05 (N)	1.25E-05 (N)	3.92E-05 (N)
SKIN (MREM)	1.56E-05 (N)	1.53E-05 (N)	1.91E-05 (N)	2.39E-05 (N)	7.39E-05 (N)
ORGAN (MREM)	4.31E-04 (N)	5.73E-02 (N)	1.34E-02 (N)	1.27E-02 (N)	8.38E-02 (N)
	LIVER	LUNG	LIVER	LIVER	LUNG
	THYROID		THYROID	THYROID	
	KIDNEY		KIDNEY	KIDNEY	
	LUNG		LUNG	LUNG	
	GI_LLI		GI_LLI	GI_LLI	

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10CFR 50 APP. I
TEENAGER RECEPTOR

----- % OF APP I. -----

	QTRLY	1ST QTR	2ND QTR	3RD QTR	4TH QTR	YRLY	% OF
	OBJ	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	OBJ	APP. I
GAMMA AIR (MRAD)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
BETA AIR (MRAD)	10.0	0.00	0.00	0.00	0.00	20.0	0.00
TOT. BODY (MREM)	2.5	0.00	0.00	0.00	0.00	5.0	0.00
SKIN (MREM)	7.5	0.00	0.00	0.00	0.00	15.0	0.00
ORGAN (MREM)	7.5	0.01	0.76	0.18	0.17	15.0	0.56

	LIVER	LUNG	LIVER	LIVER	LUNG
	THYROID		THYROID	THYROID	
	KIDNEY		KIDNEY	KIDNEY	
	LUNG		LUNG	LUNG	
	GI_LLI		GI_LLI	GI_LLI	

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
 ODCM SOFTWARE VERSION 1.1 January 1995
 ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT ONE

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 ADULT RECEPTOR

TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
GAMMA AIR (MRAD)	1.12E-05 (N)	1.09E-05 (N)	1.34E-05 (N)	1.68E-05 (N)	5.23E-05 (N)
BETA AIR (MRAD)	9.08E-06 (N)	9.81E-06 (N)	1.29E-05 (N)	1.67E-05 (N)	4.85E-05 (N)
TOT. BODY (MREM)	8.44E-06 (N)	8.15E-06 (N)	1.00E-05 (N)	1.25E-05 (N)	3.92E-05 (N)
SKIN (MREM)	1.56E-05 (N)	1.53E-05 (N)	1.91E-05 (N)	2.39E-05 (N)	7.39E-05 (N)
ORGAN (MREM)	5.58E-04 (NE)	5.04E-02 (N)	1.18E-02 (N)	1.12E-02 (N)	7.39E-02 (N)
	LIVER	LUNG	LIVER	LIVER	LUNG
	THYROID		THYROID	THYROID	
	KIDNEY		KIDNEY	KIDNEY	
	LUNG		LUNG	LUNG	
	GI_LLI		GI_LLI	GI_LLI	

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10CFR 50 APP. I
ADULT RECEPTOR

----- % OF APP I. -----

	QTRLY OBJ	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY OBJ	% OF APP. I
GAMMA AIR (MRAD)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
BETA AIR (MRAD)	10.0	0.00	0.00	0.00	0.00	20.0	0.00
TOT. BODY (MREM)	2.5	0.00	0.00	0.00	0.00	5.0	0.00
SKIN (MREM)	7.5	0.00	0.00	0.00	0.00	15.0	0.00
ORGAN (MREM)	7.5	0.01	0.67	0.16	0.15	15.0	0.49

	LIVER	LUNG	LIVER	LIVER	LUNG
	THYROID		THYROID	THYROID	
	KIDNEY		KIDNEY	KIDNEY	
	LUNG		LUNG	LUNG	
	GI_LLI		GI_LLI	GI_LLI	

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
 ODCM SOFTWARE VERSION 1.1 January 1995
 ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT TWO

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 INFANT RECEPTOR

TYPE	1ST	2ND	3RD	4TH	ANNUAL
	QUARTER	QUARTER	QUARTER	QUARTER	
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
GAMMA AIR (MRAD)	3.22E-05 (N)	6.54E-06 (N)	8.27E-06 (N)	1.01E-05 (N)	5.71E-05 (N)
BETA AIR (MRAD)	7.63E-05 (N)	6.54E-06 (N)	7.00E-06 (N)	1.07E-05 (N)	1.01E-04 (N)
TOT. BODY (MREM)	2.34E-05 (N)	4.90E-06 (N)	6.21E-06 (N)	7.54E-06 (N)	4.21E-05 (N)
SKIN (MREM)	5.42E-05 (N)	9.45E-06 (N)	1.16E-05 (N)	1.46E-05 (N)	8.99E-05 (N)
ORGAN (MREM)	1.26E-02 (N)	7.32E-04 (N)	6.46E-04 (N)	8.68E-04 (N)	1.48E-02 (N)
	LIVER	THYROID	LIVER	LIVER	THYROID
	THYROID		THYROID	THYROID	
	KIDNEY		KIDNEY	KIDNEY	
	LUNG		LUNG	LUNG	
	GI_LLI		GI_LLI	GI_LLI	

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10CFR 50 APP. I
INFANT RECEPTOR

----- % OF APP I. -----

	QTRLY	1ST QTR	2ND QTR	3RD QTR	4TH QTR	YRLY	% OF
	OBJ	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	OBJ	APP. I
GAMMA AIR (MRAD)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
BETA AIR (MRAD)	10.0	0.00	0.00	0.00	0.00	20.0	0.00
TOT. BODY (MREM)	2.5	0.00	0.00	0.00	0.00	5.0	0.00
SKIN (MREM)	7.5	0.00	0.00	0.00	0.00	15.0	0.00
ORGAN (MREM)	7.5	0.17	0.01	0.01	0.01	15.0	0.10
	LIVER	THYROID	LIVER	LIVER	THYROID		
	THYROID		THYROID	THYROID			
	KIDNEY		KIDNEY	KIDNEY			
	LUNG		LUNG	LUNG			
	GI_LLI		GI_LLI	GI_LLI			

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
 ODCM SOFTWARE VERSION 1.1 January 1995
 ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT TWO

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 CHILD RECEPTOR

TYPE	1ST	2ND	3RD	4TH	ANNUAL
	QUARTER	QUARTER	QUARTER	QUARTER	
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
GAMMA AIR (MRAD)	3.22E-05 (N)	6.54E-06 (N)	8.27E-06 (N)	1.01E-05 (N)	5.71E-05 (N)
BETA AIR (MRAD)	7.63E-05 (N)	6.54E-06 (N)	7.00E-06 (N)	1.07E-05 (N)	1.01E-04 (N)
TOT. BODY (MREM)	2.34E-05 (N)	4.90E-06 (N)	6.21E-06 (N)	7.54E-06 (N)	4.21E-05 (N)
SKIN (MREM)	5.42E-05 (N)	9.45E-06 (N)	1.16E-05 (N)	1.46E-05 (N)	8.99E-05 (N)
ORGAN (MREM)	1.34E-02 (N)	1.38E-02 (N)	2.54E-02 (N)	2.17E-02 (N)	7.42E-02 (N)
	LIVER	THYROID	LIVER	LIVER	THYROID
	THYROID		THYROID	THYROID	
	KIDNEY		KIDNEY	KIDNEY	
	LUNG		LUNG	LUNG	
	GI_LLI		GI_LLI	GI_LLI	

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10CFR 50 APP. I
CHILD RECEPTOR

----- % OF APP I. -----

	QTRLY	1ST QTR	2ND QTR	3RD QTR	4TH QTR	YRLY	% OF
	OBJ	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	OBJ	APP. I
GAMMA AIR (MRAD)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
BETA AIR (MRAD)	10.0	0.00	0.00	0.00	0.00	20.0	0.00
TOT. BODY (MREM)	2.5	0.00	0.00	0.00	0.00	5.0	0.00
SKIN (MREM)	7.5	0.00	0.00	0.00	0.00	15.0	0.00
ORGAN (MREM)	7.5	0.18	0.18	0.34	0.29	15.0	0.49
	LIVER	THYROID	LIVER	LIVER		THYROID	
	THYROID		THYROID	THYROID			
	KIDNEY		KIDNEY	KIDNEY			
	LUNG		LUNG	LUNG			
	GI_LLI		GI_LLI	GI_LLI			

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
 ODCM SOFTWARE VERSION 1.1 January 1995
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BRAIDWOOD STATION UNIT TWO

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 TEENAGER RECEPTOR

TYPE	1ST	2ND	3RD	4TH	ANNUAL
	QUARTER	QUARTER	QUARTER	QUARTER	
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
GAMMA AIR (MRAD)	3.22E-05 (N)	6.54E-06 (N)	8.27E-06 (N)	1.01E-05 (N)	5.71E-05 (N)
BETA AIR (MRAD)	7.63E-05 (N)	6.54E-06 (N)	7.00E-06 (N)	1.07E-05 (N)	1.01E-04 (N)
TOT. BODY (MREM)	2.34E-05 (N)	4.90E-06 (N)	6.21E-06 (N)	7.54E-06 (N)	4.21E-05 (N)
SKIN (MREM)	5.42E-05 (N)	9.45E-06 (N)	1.16E-05 (N)	1.46E-05 (N)	8.99E-05 (N)
ORGAN (MREM)	1.05E-02 (N)	8.98E-03 (N)	1.65E-02 (N)	1.41E-02 (N)	5.01E-02 (N)
	LIVER	THYROID	LIVER	LIVER	THYROID
	THYROID		THYROID	THYROID	
	KIDNEY		KIDNEY	KIDNEY	
	LUNG		LUNG	LUNG	
	GI_LLI		GI_LLI	GI_LLI	

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10CFR 50 APP. I
TEENAGER RECEPTOR

----- % OF APP I. -----

	QTRLY OBJ	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY OBJ	% OF APP. I
GAMMA AIR (MRAD)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
BETA AIR (MRAD)	10.0	0.00	0.00	0.00	0.00	20.0	0.00
TOT. BODY (MREM)	2.5	0.00	0.00	0.00	0.00	5.0	0.00
SKIN (MREM)	7.5	0.00	0.00	0.00	0.00	15.0	0.00
ORGAN (MREM)	7.5	0.14	0.12	0.22	0.19	15.0	0.33
	LIVER	THYROID	LIVER	LIVER		THYROID	
	THYROID		THYROID	THYROID			
	KIDNEY		KIDNEY	KIDNEY			
	LUNG		LUNG	LUNG			
	GI_LLI		GI_LLI	GI_LLI			

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
 ODCM SOFTWARE VERSION 1.1 January 1995
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BRAIDWOOD STATION UNIT TWO

ACTUAL 1999

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 ADULT RECEPTOR

TYPE	1ST	2ND	3RD	4TH	ANNUAL
	QUARTER	QUARTER	QUARTER	QUARTER	
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
GAMMA AIR (MRAD)	3.22E-05 (N)	6.54E-06 (N)	8.27E-06 (N)	1.01E-05 (N)	5.71E-05 (N)
BETA AIR (MRAD)	7.63E-05 (N)	6.54E-06 (N)	7.00E-06 (N)	1.07E-05 (N)	1.01E-04 (N)
TOT. BODY (MREM)	2.34E-05 (N)	4.90E-06 (N)	6.21E-06 (N)	7.54E-06 (N)	4.21E-05 (N)
SKIN (MREM)	5.42E-05 (N)	9.45E-06 (N)	1.16E-05 (N)	1.46E-05 (N)	8.99E-05 (N)
ORGAN (MREM)	1.36E-02 (NE)	8.03E-03 (N)	1.45E-02 (N)	1.25E-02 (N)	4.64E-02 (N)
	LIVER	THYROID	LIVER	LIVER	THYROID
	THYROID		THYROID	THYROID	
	KIDNEY		KIDNEY	KIDNEY	
	LUNG		LUNG	LUNG	
	GI_LLI		GI_LLI	GI_LLI	

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10CFR 50 APP. I
ADULT RECEPTOR

----- % OF APP I. -----

	QTRLY	1ST QTR	2ND QTR	3RD QTR	4TH QTR	YRLY	% OF
	OBJ	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	OBJ	APP. I
GAMMA AIR (MRAD)	5.0	0.00	0.00	0.00	0.00	10.0	0.00
BETA AIR (MRAD)	10.0	0.00	0.00	0.00	0.00	20.0	0.00
TOT. BODY (MREM)	2.5	0.00	0.00	0.00	0.00	5.0	0.00
SKIN (MREM)	7.5	0.00	0.00	0.00	0.00	15.0	0.00
ORGAN (MREM)	7.5	0.18	0.11	0.19	0.17	15.0	0.31

	LIVER	THYROID	LIVER	LIVER	THYROID
	THYROID		THYROID	THYROID	
	KIDNEY		KIDNEY	KIDNEY	
	LUNG		LUNG	LUNG	
	GI_LLI		GI_LLI	GI_LLI	

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
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BRAIDWOOD STATION UNIT ONE

ACTUAL 1999

MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 INFANT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY INTERNAL ORGAN	5.91E-02	2.46E-02	2.19E-02	2.60E-02	1.31E-01
LIVER	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

----- % OF APP I. -----

	QTRLY OBJ	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY OBJ	% OF APP. I
TOTAL BODY (MREM)	1.5	3.94	1.64	1.46	1.73	3.0	4.38
CRIT. ORGAN (MREM)	5.0	1.18	0.49	0.44	0.52	10.0	1.31
	LIVER	GI_LLI	GI_LLI	GI_LLI	GI_LLI		

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
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1999 ANNUAL REPORT

PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM *
PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
INFANT RECEPTOR

DOSE TYPE	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER	ANNUAL
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
TOTAL BODY	5.91E-02	2.46E-02	2.19E-02	2.60E-02	1.31E-01
INTERNAL ORGAN	5.92E-02	2.46E-02	2.19E-02	2.60E-02	1.31E-01
	LIVER	GI LLI	GI LLI	GI LLI	GI LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL	4.0 MREM	3.287
BODY		
INTERNAL	4.0 MREM	3.287
ORGAN		

GI LLI

* THIS CALCULATION OF DOSE IS BASED ON TECHNIQUES DESCRIBED IN THE COMMONWEALTH EDISON OFFSITE DOSE CALCULATION MANUAL. THESE TECHNIQUES DIFFER FROM THOSE DESCRIBED IN 40 CFR 141.

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT ONE

ACTUAL 1999

MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 CHILD RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	5.97E-02	2.48E-02	2.21E-02	2.62E-02	1.33E-01
INTERNAL ORGAN	6.04E-02	2.55E-02	2.21E-02	2.68E-02	1.34E-01
	LIVER	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

----- % OF APP I. -----

	QTRLY OBJ	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY OBJ	% OF APP. I
TOTAL BODY (MREM)	1.5	3.98	1.65	1.47	1.75	3.0	4.43
CRIT. ORGAN (MREM)	5.0	1.21	0.51	0.44	0.54	10.0	1.34
		LIVER	GI_LLI	GI_LLI	GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
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BRAIDWOOD STATION UNIT ONE

1999 ANNUAL REPORT

PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM *
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 CHILD RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	5.94E-02	2.47E-02	2.20E-02	2.61E-02	1.32E-01
INTERNAL ORGAN	5.95E-02	2.50E-02	2.20E-02	2.65E-02	1.33E-01
LIVER	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL BODY	4.0 MREM	3.305
INTERNAL ORGAN	4.0 MREM	3.325
		GI_LLI

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RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
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BRAIDWOOD STATION UNIT ONE

ACTUAL 1999

MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 TEENAGER RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	3.16E-02	1.30E-02	1.16E-02	1.37E-02	6.99E-02
INTERNAL ORGAN	3.21E-02	1.49E-02	1.16E-02	1.51E-02	7.31E-02
	LIVER	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

----- % OF APP I. -----

	QTRLY OBJ	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY OBJ	% OF APP. I
TOTAL BODY (MREM)	1.5	2.10	0.87	0.77	0.92	3.0	2.33
CRIT. ORGAN (MREM)	5.0	0.64	0.30	0.23	0.30	10.0	0.73
		LIVER	GI_LLI	GI_LLI	GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
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BRAIDWOOD STATION UNIT ONE

1999 ANNUAL REPORT

PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM *
PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
TEENAGER RECEPTOR

DOSE TYPE	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER	ANNUAL
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
TOTAL BODY	3.10E-02	1.28E-02	1.15E-02	1.36E-02	6.89E-02
INTERNAL ORGAN	3.11E-02	1.35E-02	1.15E-02	1.45E-02	7.07E-02
	GI LLI	GI LLI	GI LLI	GI LLI	GI LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL	4.0 MREM	1.723
BODY		
INTERNAL	4.0 MREM	1.768
ORGAN		

GI LLI

* THIS CALCULATION OF DOSE IS BASED ON TECHNIQUES DESCRIBED IN THE COMMONWEALTH EDISON OFFSITE DOSE CALCULATION MANUAL. THESE TECHNIQUES DIFFER FROM THOSE DESCRIBED IN 40 CFR 141.

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
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BRAIDWOOD STATION UNIT ONE

ACTUAL 1999

MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 ADULT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	2.31E-02	9.37E-03	8.38E-03	9.89E-03	5.08E-02
INTERNAL ORGAN	2.34E-02	1.18E-02	8.42E-03	1.13E-02	5.43E-02
	LIVER	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

----- % OF APP I. -----

	QTRLY OBJ	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY OBJ	% OF APP. I
TOTAL BODY (MREM)	1.5	1.54	0.62	0.56	0.66	3.0	1.69
CRIT. ORGAN (MREM)	5.0	0.47	0.24	0.17	0.23	10.0	0.54
		LIVER	GI_LLI	GI_LLI	GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
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BRAIDWOOD STATION UNIT ONE

1999 ANNUAL REPORT

PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM *
PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
ADULT RECEPTOR

DOSE TYPE	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER	ANNUAL
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
TOTAL BODY	2.23E-02	9.19E-03	8.25E-03	9.69E-03	4.94E-02
INTERNAL ORGAN	2.23E-02	9.77E-03	8.28E-03	1.05E-02	5.09E-02
	GI LLI	GI LLI	GI LLI	GI LLI	GI LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL	4.0 MREM	1.235
BODY		
INTERNAL	4.0 MREM	1.273
ORGAN		

GI LLI

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BRAIDWOOD STATION UNIT TWO

ACTUAL 1999

MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 INFANT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY INTERNAL ORGAN	5.91E-02	2.46E-02	2.19E-02	2.60E-02	1.31E-01
LIVER	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

----- % OF APP I. -----

	QTRLY OBJ	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY OBJ	% OF APP. I
TOTAL BODY (MREM)	1.5	3.94	1.64	1.46	1.73	3.0	4.38
CRIT. ORGAN (MREM)	5.0	1.18	0.49	0.44	0.52	10.0	1.31
	LIVER	GI_LLI	GI_LLI	GI_LLI	GI_LLI		

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
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BRAIDWOOD STATION UNIT TWO

1999 ANNUAL REPORT

PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM *
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 INFANT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	5.91E-02	2.46E-02	2.19E-02	2.60E-02	1.31E-01
INTERNAL ORGAN	5.92E-02	2.46E-02	2.19E-02	2.60E-02	1.31E-01
LIVER	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL BODY	4.0 MREM	3.287
INTERNAL ORGAN	4.0 MREM	3.287
		GI_LLI

* THIS CALCULATION OF DOSE IS BASED ON TECHNIQUES DESCRIBED IN THE COMMONWEALTH EDISON OFFSITE DOSE CALCULATION MANUAL. THESE TECHNIQUES DIFFER FROM THOSE DESCRIBED IN 40 CFR 141.

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
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ACTUAL 1999

MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 CHILD RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	5.97E-02	2.48E-02	2.21E-02	2.62E-02	1.33E-01
INTERNAL ORGAN	6.04E-02	2.55E-02	2.21E-02	2.68E-02	1.34E-01
	LIVER	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

----- % OF APP I. -----

	QTRLY OBJ	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY OBJ	% OF APP. I
TOTAL BODY (MREM)	1.5	3.98	1.65	1.47	1.75	3.0	4.43
CRIT. ORGAN (MREM)	5.0	1.21	0.51	0.44	0.54	10.0	1.34
		LIVER	GI_LLI	GI_LLI	GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
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BRAIDWOOD STATION UNIT TWO

1999 ANNUAL REPORT

PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM *
PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
CHILD RECEPTOR

DOSE TYPE	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER	ANNUAL
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
TOTAL	5.94E-02	2.47E-02	2.20E-02	2.61E-02	1.32E-01
BODY					
INTERNAL	5.95E-02	2.50E-02	2.20E-02	2.65E-02	1.33E-01
ORGAN					
	LIVER	GI LLI	GI LLI	GI LLI	GI LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL	4.0 MREM	3.305
BODY		
INTERNAL	4.0 MREM	3.325
ORGAN		

GI LLI

* THIS CALCULATION OF DOSE IS BASED ON TECHNIQUES DESCRIBED IN THE COMMONWEALTH EDISON OFFSITE DOSE CALCULATION MANUAL. THESE TECHNIQUES DIFFER FROM THOSE DESCRIBED IN 40 CFR 141.

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT TWO

ACTUAL 1999

MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 TEENAGER RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY INTERNAL ORGAN	3.16E-02	1.30E-02	1.16E-02	1.37E-02	6.99E-02
LIVER	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

----- % OF APP I. -----

	QTRLY OBJ	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY OBJ	% OF APP. I
TOTAL BODY (MREM)	1.5	2.10	0.87	0.77	0.92	3.0	2.33
CRIT. ORGAN (MREM)	5.0	0.64	0.30	0.23	0.30	10.0	0.73
		LIVER	GI_LLI	GI_LLI	GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
 ODCM SOFTWARE VERSION 1.1 January 1995
 ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT TWO

1999 ANNUAL REPORT

PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM *
PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
TEENAGER RECEPTOR

DOSE TYPE	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER	ANNUAL
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
TOTAL BODY	3.10E-02	1.28E-02	1.15E-02	1.36E-02	6.89E-02
INTERNAL ORGAN	3.11E-02	1.35E-02	1.15E-02	1.45E-02	7.07E-02
	GI LLI	GI LLI	GI LLI	GI LLI	GI LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL	4.0 MREM	1.723
BODY		
INTERNAL	4.0 MREM	1.768
ORGAN		

GI LLI

* THIS CALCULATION OF DOSE IS BASED ON TECHNIQUES DESCRIBED IN THE COMMONWEALTH EDISON OFFSITE DOSE CALCULATION MANUAL. THESE TECHNIQUES DIFFER FROM THOSE DESCRIBED IN 40 CFR 141.

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT TWO

ACTUAL 1999

MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS
 PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
 ADULT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY INTERNAL ORGAN	2.31E-02	9.37E-03	8.38E-03	9.89E-03	5.08E-02
LIVER	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 10 CFR 50 APP. I

----- % OF APP I. -----

	QTRLY OBJ	1ST QTR JAN-MAR	2ND QTR APR-JUN	3RD QTR JUL-SEP	4TH QTR OCT-DEC	YRLY OBJ	% OF APP. I
TOTAL BODY (MREM)	1.5	1.54	0.62	0.56	0.66	3.0	1.69
CRIT. ORGAN (MREM)	5.0	0.47	0.24	0.17	0.23	10.0	0.54
	LIVER	GI_LLI	GI_LLI	GI_LLI	GI_LLI		

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
 ODCM SOFTWARE VERSION 1.1 January 1995
 ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT TWO

1999 ANNUAL REPORT
PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM *
PERIOD OF RELEASE - 01/01/99 TO 12/31/99 CALCULATED 04/11/00
ADULT RECEPTOR

DOSE TYPE	1ST QUARTER	2ND QUARTER	3RD QUARTER	4 TH QUARTER	ANNUAL
	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	
TOTAL BODY	2.23E-02	9.19E-03	8.25E-03	9.69E-03	4.94E-02
INTERNAL ORGAN	2.23E-02	9.77E-03	8.28E-03	1.05E-02	5.09E-02
	GI LLI	GI LLI	GI LLI	GI LLI	GI LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 1999

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL	4.0 MREM	1.235
BODY		
INTERNAL	4.0 MREM	1.273
ORGAN		

GI LLI

* THIS CALCULATION OF DOSE IS BASED ON TECHNIQUES DESCRIBED IN THE COMMONWEALTH EDISON OFFSITE DOSE CALCULATION MANUAL. THESE TECHNIQUES DIFFER FROM THOSE DESCRIBED IN 40 CFR 141.

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT ONE

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/99 TO 12/31/99

CALCULATED 04/11/00

1. 10 CFR 20.1301 (a) (1) Compliance

Total Effective Dose Eqivalent, mrem/yr 8.05E-02

10 CFR 20.1301 (a) (1) limit mrem/yr 100.0

% of limit 0.08

Compliance Summary - 10CFR20

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	% of Limit
TEDE	1.46E-02	3.88E-02	1.29E-02	1.42E-02	0.08

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT ONE

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/99 TO 12/31/99

CALCULATED 04/11/00

2. 10 CFR 20.1301 (d) / 40 CFR 190 Compliance

		Dose (mrem)	Limit (mrem)	% of Limit
Whole Body (DDE)	Plume	<u>3.92E-05</u>		
	Skyshine	<u>0.00E+00</u>		
	Ground	<u>5.90E-07</u>		
	Total	<u>3.98E-05</u>	<u>25.0</u>	<u>0.00</u>
Organ Dose (CDE)	Thyroid	<u>7.77E-02</u>	<u>75.0</u>	<u>0.10</u>
	Gonads	<u>7.92E-02</u>	<u>25.0</u>	<u>0.32</u>
	Breast	<u>7.79E-02</u>	<u>25.0</u>	<u>0.31</u>
	Lung	<u>7.78E-02</u>	<u>25.0</u>	<u>0.31</u>
	Marrow	<u>7.82E-02</u>	<u>25.0</u>	<u>0.31</u>
	Bone	<u>7.90E-02</u>	<u>25.0</u>	<u>0.32</u>
	Remainder	<u>8.53E-02</u>	<u>25.0</u>	<u>0.34</u>
	CEDE	<u>8.05E-02</u>		
	TEDE	<u>8.05E-02</u>	<u>100.0</u>	<u>0.08</u>

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT TWO

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/99 TO 12/31/99

CALCULATED 04/13/00

1. 10 CFR 20.1301 (a) (1) Compliance

Total Effective Dose Eqivalent, mrem/yr	<u>6.63E-02</u>
10 CFR 20.1301 (a) (1) limit mrem/yr	<u>100.0</u>
% of limit	<u>0.07</u>

Compliance Summary - 10CFR20

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	% of Limit
TEDE	2.44E-02	1.23E-02	1.46E-02	1.50E-02	0.07

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

BRAIDWOOD STATION UNIT TWO

10 CFR 20 COMPLIANCE ASSESSMENT

PERIOD OF ASSESSMENT 01/01/99 TO 12/31/99

CALCULATED 04/13/00

2. 10 CFR 20.1301 (d) / 40 CFR 190 Compliance

		Dose (mrem)	Limit (mrem)	% of Limit
Whole Body (DDE)	Plume	<u>4.21E-05</u>		
	Skyshine	<u>0.00E+00</u>		
	Ground	<u>8.86E-06</u>		
	Total	<u>5.09E-05</u>	<u>25.0</u>	<u>0.00</u>
Organ Dose (CDE)	Thyroid	<u>6.38E-02</u>	<u>75.0</u>	<u>0.09</u>
	Gonads	<u>6.50E-02</u>	<u>25.0</u>	<u>0.26</u>
	Breast	<u>6.37E-02</u>	<u>25.0</u>	<u>0.25</u>
	Lung	<u>6.36E-02</u>	<u>25.0</u>	<u>0.25</u>
	Marrow	<u>6.40E-02</u>	<u>25.0</u>	<u>0.26</u>
	Bone	<u>6.48E-02</u>	<u>25.0</u>	<u>0.26</u>
	Remainder	<u>7.11E-02</u>	<u>25.0</u>	<u>0.28</u>
	CEDE	<u>6.63E-02</u>		
	TEDE	<u>6.63E-02</u>	<u>100.0</u>	<u>0.07</u>

RESULTS BASED UPON: ODCM ANNEX REVISION 2 DECEMBER 1996
ODCM SOFTWARE VERSION 1.1 January 1995
ODCM DATABASE VERSION 1.1 January 1995

CEDAR BRAIDWOOD STATION
34 ft. WIND SPEED and WIND DIRECTION
January-March 1999
199.30 ft. DIFFERENTIAL TEMPERATURE

NUMBER OF OBSERVATIONS = 2158
VALUES ARE PERCENT OCCURRENCE

SPEED CLASS	WIND DIRECTION CLASSES												STABILITY CLASSES										
	N	NE	NE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW	MM	Total	EU	MJ	SI	N	SS	MS	ES
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
MJ	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
SI	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
A	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
L	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
SS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
MS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
MJ	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
SI	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
N	.14	.05	.14	.37	.42	.09	.09	.00	.00	.00	.00	.00	.05	.00	.14	.05	.05	.05	1.62	1.62	1.62	1.62	
SS	.19	.28	.33	1.26	.98	.37	.19	.23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
MS	.42	.23	.32	.51	.60	.60	.14	.05	.05	.14	.09	.19	.23	.42	.46	.56	.56	5.56	5.56	5.56	5.56		
ES	.14	.19	.05	.38	.38	.14	.00	.05	.09	.09	.05	.09	.24	.24	.42	.39	2.64	2.64	2.64	2.64	2.64	2.64	
EU	.00	.05	.05	.05	.00	.05	.00	.00	.00	.00	.00	.00	.05	.05	.05	.00	.00	.00	.00	.00	.00	.00	
MJ	.14	.09	.19	.14	.23	.00	.00	.05	.05	.05	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
SI	.05	.14	.09	.14	.05	.14	.00	.05	.05	.05	.05	.00	.05	.05	.05	.00	.00	.00	.00	.00	.00	.00	
N	.70	.83	1.44	2.46	1.07	.60	.19	.32	.19	.09	.19	.42	.37	.83	.60	.23	10.52	10.52	10.52	10.52	10.52	10.52	
SS	.97	.70	.74	1.81	.74	1.76	.93	1.16	.46	.37	.60	1.39	.70	1.67	1.07	.88	15.94	15.94	15.94	15.94	15.94	15.94	
MS	.05	.00	.09	.19	.05	.23	.14	.19	.19	.09	.14	1.02	.42	.42	.09	.32	3.61	3.61	3.61	3.61	3.61	3.61	
ES	.00	.00	.05	.00	.19	.05	.05	.05	.00	.05	.05	.28	.09	.05	.05	.00	.93	.93	.93	.93	.93	.93	
EU	.19	.19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.05	.00	.00	.00	.00	.00	.00	.00	.00	
MJ	.05	.14	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	
SI	.09	.05	.05	.05	.09	.14	.05	.19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
N	.32	.79	1.99	1.11	1.11	.93	1.16	1.02	.74	.19	.32	.74	.97	1.81	.93	.74	14.87	14.87	14.87	14.87	14.87	14.87	
SS	.28	.14	.51	.70	.23	.46	.83	.83	1.34	1.11	1.20	1.44	1.25	1.95	.60	.56	13.44	13.44	13.44	13.44	13.44	13.44	
MS	.00	.00	.00	.00	.00	.05	.00	.05	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
EU	.00	.00	.00	.00	.00	.00	.05	.05	.09	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
MJ	.00	.00	.00	.00	.00	.00	.05	.05	.09	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
SI	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
N	.46	.42	.74	.00	.05	.14	.14	.37	1.58	.70	.42	.51	.88	1.53	.14	.65	8.71	8.71	8.71	8.71	8.71	8.71	
SS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
MS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	

ConEd BRAIDWOOD STATION
34 ft. WIND SPEED and WIND DIRECTION

January-March 1999
199-30 ft. DIFFERENTIAL TEMPERATURE

SPEED CLASS	WIND DIRECTION CLASSES															STABILITY CLASSES									
	N	MNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	NNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
EU	.00	.00	.00	.00	.00	.00	.00	.00	.05	.23	.00	.00	.00	.00	.00	.00	.28	.28							
I MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00					
9 SU	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.05	.00	.05	.00	.00	.00	.14								
- N	.00	.00	.00	.00	.00	.00	.00	.00	.37	.00	.05	.09	.19	.05	.00	.00	.74								
2 SS	.00	.00	.00	.00	.00	.00	.00	.09	.00	.00	.14	.28	.05	.00	.00	.00	.56								
4 MS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00								
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00								
																									1.71
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00					
G MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00					
T SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.05								
- N	.00	.00	.00	.00	.00	.00	.00	.00	.09	.05	.05	.00	.00	.00	.00	.00	.19								
2 SS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09	.05	.00	.00	.00	.14								
4 MS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00								
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00								
																									.37
TOT	4.17	4.27	6.86	9.15	6.36	5.61	4.40	5.19	7.14	5.24	4.64	7.14	7.19	10.71	6.22	5.71	100.00	2.78	2.92	2.97	36.65	41.80	9.31	3.57	100.00

Wind Direction by Stability

N	MNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	NNW	NW	NNW	TOTAL	-STABILITY CLASSES-
.19	.23	.05	.00	.05	.00	.00	.14	.23	.56	.28	.00	.00	.37	.60	.09	2.78	Extremely Unstable
.19	.23	.19	.14	.28	.00	.14	.19	.14	.05	.32	.00	.00	.09	.51	.46	2.92	Moderately Unstable
.14	.19	.14	.23	.19	.19	.19	.19	.14	.28	.23	.05	.19	.28	.19	.19	2.97	Slightly Unstable
1.62	2.09	4.31	3.94	2.64	1.76	1.58	1.71	2.97	1.02	1.07	1.76	2.55	4.26	1.71	1.67	36.65	Neutral
1.44	1.11	1.67	3.76	2.00	2.60	2.18	2.60	3.24	2.92	2.23	3.52	3.43	4.59	2.18	2.32	41.80	Slightly Stable
.46	.23	.42	.70	.65	.88	.28	.28	.32	.28	.42	1.44	.70	.83	.56	.88	9.31	Moderately Stable
.14	.19	.09	.38	.56	.19	.05	.09	.09	.14	.09	.37	.33	.28	.47	.09	3.57	Extremely Stable

Wind Direction by Wind Speed

N	MNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	NNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	CALM
.88	.75	.84	2.52	2.38	1.21	.42	.33	.14	.23	.28	.37	.84	1.03	1.45	1.16	14.83	0.9 - 3.5 mph
1.90	1.81	2.64	4.73	2.36	2.78	1.30	1.90	1.02	.74	1.25	3.15	1.67	3.01	1.99	1.48	33.73	3.6 - 7.5 mph
.93	1.30	2.55	1.90	1.53	1.48	2.27	1.99	2.18	1.39	1.95	2.41	2.32	4.12	2.13	1.76	32.21	7.6 - 12.5 mph
.46	.42	.83	.00	.09	.14	.42	.97	3.15	2.55	1.02	.88	1.81	2.46	.65	1.30	17.15	12.6 - 18.5 mph
.00	.00	.00	.00	.00	.00	.00	.56	.23	.09	.23	.51	.09	.00	.00	.00	1.71	18.6 - 24.5 mph
.00	.00	.00	.00	.00	.00	.00	.09	.09	.05	.09	.05	.00	.00	.00	.00	.37	> 24.5 mph

ConEd BRAIDWOOD STATION
34 ft. WIND SPEED and WIND DIRECTION

April-June 1999
199-30 ft. DIFFERENTIAL TEMPERATURE

NUMBER OF OBSERVATIONS = 2184
VALUES ARE PERCENT OCCURRENCE

ConEd BRAIDWOOD STATION
34 ft. WIND SPEED and WIND DIRECTION

April-June 1999
199-30 ft. DIFFERENTIAL TEMPERATURE

SPEED CLASS	WIND DIRECTION CLASSES															STABILITY CLASSES									
	N	MNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	MSW	W	NNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	WS	ES	TOTAL
EU	.00	.00	.00	.00	.00	.00	.00	.00	.05	.09	.00	.00	.09	.00	.00	.00	.23	.23							
1 MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.05	.05							
9 SU	.00	.00	.00	.00	.00	.05	.00	.00	.00	.05	.00	.00	.05	.00	.00	.00	.14	.14							
- N	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.32	.18	.05	.00	.00	.00	.60	.60							
2 SS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00						
4 MS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00						
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00						
																								1.01	
EU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00						
G MU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00						
T SU	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00						
- N	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.05	.05						
2 SS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00						
4 MS	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00						
ES	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00						
																								.05	
TOT	2.93	4.23	7.79	9.47	9.77	8.17	8.20	9.94	7.33	4.86	4.77	4.55	4.77	5.65	4.09	3.48	100.00	9.02	4.76	6.04	32.60	34.98	9.20	3.39	100.00

Wind Direction by Stability

N	MNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	MSW	W	NNW	NW	NNW	TOTAL	-STABILITY CLASSES-
.23	.27	1.01	.37	.82	.82	.92	.92	1.19	.55	.14	.18	.46	.60	.27	.27	9.02	Extremely Unstable
.18	.09	.50	.23	.41	.37	.27	.64	.32	.41	.23	.05	.27	.37	.27	.14	4.76	Moderately Unstable
.09	.41	.60	.32	.37	.50	.50	.64	.46	.46	.32	.09	.41	.18	.50	.18	6.04	Slightly Unstable
1.37	1.51	3.30	3.21	1.83	1.51	1.47	2.38	2.61	1.79	2.70	1.47	1.83	2.29	1.51	1.83	32.60	Neutral
.96	1.37	1.88	3.75	3.53	3.39	4.35	4.85	2.29	1.28	1.14	1.83	1.14	1.47	.96	.78	34.98	Slightly Stable
.05	.28	.42	1.06	2.03	1.43	.64	.32	.37	.23	.18	.60	.46	.51	.41	.23	9.20	Moderately Stable
.05	.29	.09	.54	.78	.15	.05	.19	.10	.14	.05	.34	.19	.24	.15	.05	3.39	Extremely Stable

Wind Direction by Wind Speed

N	MNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	MSW	W	NNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	CALM
.55	1.07	1.10	2.79	4.36	2.31	.55	.47	.19	.24	.42	.61	.74	1.34	.74	.64	18.13	0.9 - 3.5 mph
1.10	1.74	3.07	5.08	3.94	4.85	5.49	5.45	2.47	.92	1.10	2.15	1.60	1.69	1.65	1.05	43.36	3.6 - 7.5 mph
1.14	.92	2.93	1.60	1.42	.82	1.69	3.34	3.94	2.34	2.15	1.42	1.42	2.15	1.51	1.60	30.40	7.6 - 12.5 mph
.14	.50	.69	.00	.05	.14	.41	.69	.69	1.19	.78	.18	.78	.46	.18	.18	7.05	12.6 - 18.5 mph
.00	.00	.00	.00	.00	.05	.00	.05	.18	.32	.18	.23	.00	.00	.00	1.01	18.6 - 24.5 mph	
.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	> 24.5 mph	

ConEd BRAIDWOOD STATION
34 ft. WIND SPEED and WIND DIRECTION

July-September 1999
199-30 ft. DIFFERENTIAL TEMPERATURE

NUMBER OF OBSERVATIONS = 2208
VALUES ARE PERCENT OCCURRENCE

ComEd BRAIDWOOD STATION

July-September 1999
199-30 ft. DIFFERENTIAL TEMPERATURE

TOT 5.76 5.44 4.53 4.08 4.17 5.67 4.62 4.53 5.30 8.06 8.43 9.88 9.39 6.44 6.17 7.52 100.00 16.12 5.66 5.75 20.92 27.94 13.04 10.55 100.00

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NWW	TOTAL	-STABILITY CLASSES-
1.04	.86	.91	.32	.27	.18	.36	.63	.63	2.58	1.49	1.49	1.90	1.04	.82	1.59	16.12	Extremely Unstable
.32	.36	.27	.18	.00	.18	.32	.36	.27	.27	.50	.59	.82	.45	.36	.41	5.66	Moderately Unstable
.41	.59	.27	.18	.05	.23	.14	.36	.32	.27	.41	.72	.72	.32	.36	.41	5.75	Slightly Unstable
1.63	1.36	1.49	.95	.68	.63	.68	.86	.77	1.04	2.49	1.63	2.13	1.22	1.18	2.17	20.92	Neutral
1.49	1.36	.72	1.27	1.27	1.81	1.81	1.68	2.94	3.08	2.54	3.17	1.13	.82	1.09	1.77	27.94	Slightly Stable
.45	.45	.32	.82	1.09	1.40	1.00	.50	.27	.59	.63	1.22	1.27	1.31	1.13	.59	13.04	Moderately Stable
.41	.46	.55	.37	.82	1.23	.32	.14	.09	.23	.37	1.05	1.42	1.28	1.23	.59	10.55	Extremely Stable

Wind Direction by Wind Speed

ComEd BRAIDWOOD STATION
34 FT. WIND SPEED and WIND DIRECTION

October-December 1999
199-30 ft. DIFFERENTIAL TEMPERATURE

NUMBER OF OBSERVATIONS = 2208
VALUES ARE PERCENT OCCURRENCE

ComEd BRAIDWOOD STATION
34 ft. WIND SPEED and WIND DIRECTION

October-December 1999
199-30 ft. DIFFERENTIAL TEMPERATURE

TOT 4.10 3.73 2.73 2.79 3.56 3.64 4.71 8.02 8.84 11.61 7.03 5.22 8.86 8.89 7.71 8.57 100.00 5.43 3.40 3.44 25.91 44.84 11.46 5.53 100.00

Wind Direction by Stability

N	NNW	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	NNW	NW	NNW	TOTAL	-STABILITY CLASSES-
.27	.14	.09	.09	.09	.27	.41	.63	.86	.36	.18	.27	.45	.54	.68	5.43	Extremely Unstable	
.27	.32	.05	.00	.00	.05	.09	.05	.18	.45	.59	.27	.23	.32	.18	.36	3.40	Moderately Unstable
.09	.09	.09	.05	.00	.09	.14	.18	.27	.27	.50	.36	.27	.09	.54	.41	3.44	Slightly Unstable
1.49	1.54	.72	.63	.59	.45	.72	1.54	2.40	2.76	2.45	1.63	2.49	1.36	2.13	2.99	25.91	Neutral
1.59	1.27	1.50	1.46	1.82	1.91	3.31	5.66	4.76	5.48	2.49	1.77	2.90	3.63	2.45	2.86	44.84	Slightly Stable
.18	.28	.18	.46	.51	.91	.05	.18	.50	1.45	.55	.73	1.73	1.97	.96	.82	11.46	Moderately Stable
.20	.10	.10	.10	.55	.15	.14	.00	.10	.33	.10	.28	.97	1.08	.90	.45	5.53	Extremely Stable

Wind Direction by Wind Speed