

Exelon Generation Company, LLC      www.exeloncorp.com  
Byron Station  
4450 North German Church Road  
Byron, IL 61010-9794

Nuclear  
10 CFR 50.36a

April 26, 2002

LTR: BYRON 2002-0034  
File: 2.12.1522

United States Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555-0001

Byron Station, Units 1 and 2  
Facility Operating License Nos. NPF-37 and NPF-66  
NRC Docket Nos. STN 50-454 and STN 50-455

Subject: 2001 Annual Radioactive Effluent Release Report

Enclosed is the Annual Radioactive Effluent Release Report for Byron Station. This report is being submitted in accordance with 10 CFR 50.36a, "Technical specifications on effluents from nuclear power reactors," paragraph (a)(2), and includes a summary of radiological liquid and gaseous effluents and solid waste released from the site from January 2001, through December 2001.

If you have any questions regarding this information, please contact W. Grundmann, Regulatory Assurance Manager, at (815) 406-2800.

Respectfully,



Richard P. Loprigre  
Site Vice President  
Byron Nuclear Generating Station

RPL/DAT/rf/bka

Attachment

cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector – Byron Station  
NRC Project Manager – NRR – Byron Station (w/o enclosure)  
Office of Nuclear Facility Safety / Illinois Department of Nuclear Safety  
U.S. Environmental Protection Agency, Air and Radiation Division – Region V

IE48

BYRON NUCLEAR POWER STATION  
UNIT 1/2 DOCKET NUMBER STN-50-454/455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
January, 2001 THROUGH December, 2001  
Supplemental Information

1. Regulatory Limits

a. Fission and activation gases:

Tech Spec Whole Body = 500 mrem/year  
Skin = 3000 mrem/year

10CFR50 Gamma = 5 mrad/quarter; 10 mrad/year  
Beta = 10 mrad/quarter; 20 mrad/year

b. Iodine: (summed with particulate, see below)

c. Particulates with half-lives > 8 days:

Tech Spec Organ = 1500 mrem/year  
10CFR50 Organ = 7.5 mrem/quarter; 15 mrem/year

d. Liquid Effluents:

10CFR50 Whole Body = 1.5 mrem/quarter; 3 mrem year  
Organ = 5 mrem/quarter; 10 mrem/year

e. Total Effective Dose Equivalent:

10CFR20 TEDE = 100 mrem/year

2. Maximum Permissible Concentration

- a. Fission and Activation Gases: 10CFR20 Appendix B Table 2
- b. Iodine: 10CFR20 Appendix B Table 2
- c. Particulates: 10CFR20 Appendix B Table 2
- d. Liquid Effluents: 10 X 10CFR20 Appendix B Table 2

3. Average Energy: This item is not applicable. Release rates are calculated using an isotopic mix rather than average energy.

4. Measurements and Approximations of Total Radioactivity

- a. Fission and Activation Gases: Prior to release, the isotopic content is determined. Released activity is calculated using volume of release, which is determined by the change in tank or containment pressure. Additional methods of calculation utilize historical data and assign an isotopic mix which is representative of normal vent stack isotopics.
- b. Particulate, Tritium and Iodine sampling media for the plant vent stacks are collected and isotopically analyzed weekly for the plant vent stacks.

BYRON NUCLEAR POWER STATION  
UNIT 1/2 DOCKET NUMBER STN-50-454/455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
January, 2001 THROUGH December, 2001  
Supplemental Information

- c. Liquid effluents: Batch releases are isotopically analyzed prior to release. Total release activity is calculated using volume of release. Total tritium activity released is calculated from the highest of a monthly circulating water blowdown composite activity or a sum of the input composite activities.
- d. Analysis results which are less than the lower limit of detection (<LLD) are reported in units of Ci/ml unless otherwise noted. All LLD values are listed in Attachment A.

5. Batch Releases:

a. Liquid:

- 1. Number of batch releases = 142
- 2. Total time period for batch releases = 14,936 minutes
- 3. Maximum time period for a batch release = 329 minutes
- 4. Average time period for a batch release = 105 minutes
- 5. Minimum time period for a batch release = 09 minutes
- 6. Average stream flow during periods of release of effluent into a flowing stream = 236.8 m<sup>3</sup>/sec, based on information from the National Weather Service or Army Corps of Engineers for the Rock River.

b. Gaseous:

- 1. Number of batch releases = 279
- 2. Total time period for batch releases = 48,540 minutes
- 3. Maximum time period for a batch release = 4,940 minutes
- 4. Average time period for batch releases = 174 minutes
- 5. Minimum time period for a batch release = 46 minutes

6. Abnormal Releases:

a. Liquid - None

b. Gaseous – None

BYRON NUCLEAR POWER STATION  
UNIT 1 DOCKET NUMBER STN-50-454  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

**GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES**

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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**A. FISSION AND ACTIVATION GAS RELEASES**

1. Total Release Activity:	Ci	2.18E-01	2.68E-01	1.23E-01	3.04E-01
2. Maximum Release Rate for Quarter:	uCi/sec	4.27E+00	1.56E+00	1.56E+00	3.74E+00
3. % of Tech. Spec. Limits *					
a. Whole Body (500 mrem/yr):	%	0.00	0.00	0.00	0.00
b. Skin (3000 mrem/yr):	%	0.00	0.00	0.00	0.00
4. % of 10CFR50 Limits					
a. Gamma Quarterly (5 mrad):	%	0.00	0.00	0.00	0.00
b. Beta Quarterly (10 mrad):	%	0.00	0.00	0.00	0.00
c. Gamma Annual (10 mrad):	%	0.00	0.00	0.00	0.00
d. Beta Annual (20 mrad):	%	0.00	0.00	0.00	0.00

**B. IODINE RELEASES \*\***

1. Total I-131 Activity:	Ci	<LLD	<LLD	<LLD	<LLD
2. Average I-131 Release Rate:	uCi/sec	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**C. PARTICULATE (>8 day half-life) RELEASES \*\***

1. Total Particulate Activity:	Ci	<LLD	6.96E-06	<LLD	<LLD
2. Average Particulate Release Rate:	uCi/sec	0.00E+00	8.85E-07	0.00E+00	0.00E+00
3. Gross Alpha Activity for Quarter:	Ci	<LLD	<LLD	<LLD	<LLD

**D. TRITIUM RELEASES \*\***

1. Total Tritium Activity:	Ci	8.00E-01	2.46E-01	4.98E-01	6.99E-01
2. Average Tritium Release Rate:	uCi/sec	1.03E-01	3.12E-02	6.27E-02	8.79E-02

\* % of Tech. Spec. limits is based on the maximum release rate for the period considered.

\*\* Iodine, particulate, and tritium are expressed as a total limit. See Step E.

BYRON NUCLEAR POWER STATION  
UNIT 1 DOCKET NUMBER STN-50-454  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

**GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES (CONT.)**

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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E. TOTAL OF IODINE, PARTICULATE (>8 day half-life), AND TRITIUM RELEASES

1. Total Activity:	Ci	8.00E-01	2.46E-01	4.98E-01	6.99E-01
2. % of Tech. Spec. Limits					
a. Any Organ (1500 mrem/yr):	%	0.00	0.00	0.00	0.00
3. % of 10CFR50 Limit					
a. Quarterly Any Organ (7.5 mrem):	%	0.00	0.00	0.00	0.00
b. Annual Any Organ (15 mrem):	%	0.00	0.00	0.01	0.00

**GASEOUS EFFLUENTS - VENT STACK RELEASES - BATCH MODE**

F. FISSION AND ACTIVATION GAS RELEASES

Ar-41:	Ci	4.25E-05	3.32E-03	5.36E-03	5.44E-03
Kr-85:	Ci	<LLD	<LLD	<LLD	<LLD
Kr-85m:	Ci	<LLD	<LLD	<LLD	2.01E-04
Kr-87:	Ci	<LLD	<LLD	<LLD	<LLD
Kr-88:	Ci	<LLD	<LLD	<LLD	<LLD
Xe-131m:	Ci	<LLD	<LLD	1.27E-03	<LLD
Xe-133:	Ci	1.09E-01	9.51E-02	9.35E-02	2.41E-01
Xe-133m:	Ci	1.30E-03	5.21E-04	7.00E-04	3.98E-03
Xe-135:	Ci	3.41E-03	9.27E-05	1.09E-03	1.24E-02
Xe-138:	Ci	<LLD	<LLD	<LLD	<LLD

BYRON NUCLEAR POWER STATION  
UNIT 1 DOCKET NUMBER STN-50-454  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

**GASEOUS EFFLUENTS - VENT STACK RELEASES - BATCH MODE (CONT.)**

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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G. IODINE RELEASES

I-131:	Ci	*	*	*	*
I-133:	Ci	*	*	*	*
I-135:	Ci	*	*	*	*

\* Value reported as CONTINUOUS RELEASE MODE.

H. PARTICULATE (>8 day half-life) RELEASES

Sr-89:	Ci	*	*	*	*
Sr-90:	Ci	*	*	*	*

\* Value reported as CONTINUOUS RELEASE MODE.

**GASEOUS EFFLUENTS - VENT STACK RELEASES - CONTINUOUS MODE**

I. FISSION AND ACTIVATION GAS RELEASES

Xe-133:	Ci	1.04E-01	1.70E-01	2.07E-02	4.14E-02
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BYRON NUCLEAR POWER STATION  
 UNIT 1 DOCKET NUMBER STN-50-454  
 RADIOACTIVE EFFLUENT RELEASE REPORT  
 JANUARY, 2001 THROUGH DECEMBER, 2001

**GASEOUS EFFLUENTS - VENT STACK RELEASES - CONTINUOUS MODE (CONT.)**

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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J. IODINE RELEASES

I-131:	Ci	<LLD	<LLD	<LLD	<LLD
I-133:	Ci	<LLD	<LLD	<LLD	<LLD
I-135:	Ci	<LLD	<LLD	<LLD	<LLD

K. PARTICULATE (>8 day half-life) RELEASES

Sr-89:	Ci	<LLD	<LLD	<LLD	<LLD
Sr-90:	Ci	<LLD	<LLD	<LLD	<LLD
Cr-51:	Ci	<LLD	5.28E-06	<LLD	<LLD
Co-60:	Ci	<LLD	1.68E-06	<LLD	<LLD

**LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES**

L. FISSION AND ACTIVATION PRODUCT RELEASES

1. Total Activity Released:	Ci	1.66E-02	3.37E-02	5.54E-02	3.68E-02
2. Average Concentration Released For Quarter:	uCi/ml	5.18E-09	1.04E-08	1.51E-08	1.12E-08

3. % of 10CFR50 Limits

a. Quarterly Whole Body (1.5 mrem):	%	0.04	0.03	0.04	0.05
b. Quarterly Any Organ (5.0 mrem):	%	0.01	0.02	0.02	0.02
c. Annual Whole Body (3.0 mrem):	%	0.02	0.02	0.02	0.03
d. Annual Any Organ (10.0 mrem):	%	0.00	0.01	0.01	0.01

BYRON NUCLEAR POWER STATION  
UNIT 1 DOCKET NUMBER STN-50-454  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

**LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES (CONT.)**

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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M. TRITIUM

1. Total Activity Released:
2. Average Concentration Released For Quarter:
3. % of Tech Spec Limit (1.00E-2 uCi/ml):

Ci	3.03E+02	1.95E+02	3.22E+02	3.85E+02
uCi/ml	9.47E-05	6.04E-05	8.75E-05	1.17E-04
%	0.95	0.60	0.88	1.17

N. DISSOLVED NOBLE GASES

1. Total Activity Released:
2. Average Concentration Released For Quarter:
3. % of Tech. Reqt. Manual Limit (2.00E-4 uCi/ml):

Ci	2.64E-03	5.10E-03	8.91E-05	6.86E-04
uCi/ml	8.24E-10	1.58E-09	2.42E-11	2.09E-10
%	4.12E-04	7.90E-04	1.21E-05	1.04E-04

O. GROSS ALPHA

1. Total Activity Released:
2. Average Concentration Released For Quarter:

Ci	<LLD	<LLD	<LLD	<LLD
uCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00

P. VOLUME OF WASTE  
RELEASED PER UNIT:

liters	1.23E+06	1.47E+06	1.44E+06	1.70E+06
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Q. VOLUME OF DILUTION  
WATER PER UNIT:

liters	3.20E+09	3.23E+09	3.68E+09	3.29E+09
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**LIQUID EFFLUENTS - CONTINUOUS MODE**

R. LIQUID EFFLUENTS

- Fe-55:  
Sr-89:  
Sr-90:

\* Value reported as LIQUID EFFLUENTS - BATCH MODE

Ci	*	*	*	*
Ci	*	*	*	*
Ci	*	*	*	*



BYRON NUCLEAR POWER STATION  
UNIT 1 DOCKET NUMBER STN-50-454  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

**LIQUID EFFLUENTS - BATCH MODE**

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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S. LIQUID EFFLUENTS

Fe-55:	Ci	3.15E-03	7.65E-04	5.00E-04	8.12E-03
Sr-89:	Ci	<LLD	<LLD	<LLD	<LLD
Sr-90:	Ci	<LLD	<LLD	<LLD	<LLD
H-3:	Ci	3.03E+02	1.95E+02	3.22E+02	3.85E+02
Ar-41:	Ci	<LLD	<LLD	<LLD	<LLD
Cr-51:	Ci	<LLD	1.17E-04	1.72E-03	3.59E-05
Mn-54:	Ci	1.19E-04	4.67E-05	2.34E-04	4.40E-05
Fe-59:	Ci	2.78E-06	7.92E-06	<LLD	<LLD
Co-57:	Ci	5.01E-05	1.14E-05	1.80E-05	5.31E-06
Co-58:	Ci	7.51E-03	3.90E-03	3.66E-03	7.26E-04
Co-60:	Ci	1.64E-03	1.40E-03	2.78E-03	2.12E-03
Zn-65:	Ci	<LLD	<LLD	<LLD	<LLD
Kr-85:	Ci	2.05E-03	3.66E-03	<LLD	3.70E-04
Kr-85m:	Ci	<LLD	<LLD	<LLD	<LLD
Kr-87:	Ci	<LLD	<LLD	<LLD	<LLD
Kr-88:	Ci	<LLD	<LLD	<LLD	<LLD
Sr-92:	Ci	3.89E-06	<LLD	<LLD	<LLD
Nb-95:	Ci	1.50E-05	8.35E-06	1.12E-04	<LLD
Zr-95:	Ci	6.11E-06	<LLD	<LLD	<LLD
Zr-97:	Ci	<LLD	<LLD	<LLD	<LLD
Mo-99:	Ci	<LLD	<LLD	<LLD	<LLD
Tc-99m:	Ci	<LLD	<LLD	<LLD	<LLD
Tc-104:	Ci	<LLD	<LLD	<LLD	<LLD
Ag-110m:	Ci	2.81E-05	1.04E-05	1.19E-05	1.48E-04
Sn-113:	Ci	<LLD	<LLD	<LLD	<LLD
Te-121m:	Ci	<LLD	<LLD	<LLD	<LLD
Te-123m:	Ci	5.14E-05	5.10E-04	1.43E-05	3.42E-04
Te-125m:	Ci	2.80E-03	2.38E-02	3.54E-03	2.75E-02
Sb-122:	Ci	<LLD	9.24E-06	<LLD	<LLD
Sb-124:	Ci	3.73E-04	2.51E-04	2.87E-03	3.29E-05
Sb-125:	Ci	3.97E-03	3.12E-03	4.04E-02	5.97E-03
Sb-126:	Ci	<LLD	7.97E-06	<LLD	<LLD

BYRON NUCLEAR POWER STATION  
UNIT 1 DOCKET NUMBER STN-50-454  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

**LIQUID EFFLUENTS - BATCH MODE (CONT.)**

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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S. LIQUID EFFLUENTS (CONT.)

I-131:	Ci	<LLD	1.62E-05	1.81E-06	3.25E-06
I-132:	Ci	<LLD	2.49E-04	<LLD	<LLD
I-133:	Ci	<LLD	2.37E-06	<LLD	<LLD
I-135:	Ci	<LLD	<LLD	<LLD	<LLD
Xe-131m:	Ci	<LLD	<LLD	<LLD	<LLD
Xe-133:	Ci	5.69E-04	1.37E-03	8.91E-05	3.16E-04
Xe-133m:	Ci	<LLD	<LLD	<LLD	<LLD
Xe-135:	Ci	1.14E-05	7.67E-05	<LLD	<LLD
Xe-135m:	Ci	<LLD	<LLD	<LLD	<LLD
Xe-138:	Ci	<LLD	<LLD	<LLD	<LLD
Cs-134:	Ci	<LLD	<LLD	<LLD	<LLD
Cs-137:	Ci	<LLD	<LLD	<LLD	<LLD
Ba-140:	Ci	<LLD	<LLD	<LLD	<LLD
La-140:	Ci	<LLD	<LLD	<LLD	<LLD
Ce-141:	Ci	<LLD	<LLD	<LLD	<LLD
Ce-144:	Ci	<LLD	<LLD	<LLD	<LLD
Sr-85:	Ci	9.09E-06	1.61E-05	<LLD	<LLD
Te-132:	Ci	<LLD	2.17E-04	3.71E-05	<LLD
Ba-133:	Ci	<LLD	3.19E-06	<LLD	<LLD
Na-24:	Ci	<LLD	<LLD	2.35E-05	<LLD

T. 10CFR20 PUBLIC TEDE COMPLIANCE

1. % OF 10CFR20 TEDE LIMIT  
(100 mrem/yr):

%	0.00	0.00	0.00	0.00
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U. 40CFR190 Compliance

1. % of 40CFR190 DDE (25 mrem/yr)  
2. % of 40CFR190 CDE (25 mrem/yr)  
3. % of 40CFR190 CDE (Thyroid)  
(75 mrem/yr)

%	0.00	0.00	0.00	0.00
%	0.00	0.00	0.00	0.00
%	0.00	0.00	0.00	0.00
%	0.00	0.00	0.00	0.00

BYRON NUCLEAR POWER STATION  
UNIT 2 DOCKET NUMBER STN-50-455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

**GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES**

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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**A. FISSION AND ACTIVATION GAS RELEASES**

1. Total Release Activity:	Ci	2.18E-01	2.73E-01	9.13E-02	2.55E-01
2. Maximum Release Rate for Quarter:	uCi/sec	4.27E+00	1.22E+00	9.84E-01	3.74E+00
3. % of Tech. Spec. Limits:*					
a. Whole Body (500 mrem/yr):	%	0.00	0.00	0.00	0.00
b. Skin (3000 mrem/yr):	%	0.00	0.00	0.00	0.00
4. % of 10CFR50 Limits					
a. Gamma Quarterly (5 mrad):	%	0.00	0.00	0.00	0.00
b. Beta Quarterly (10 mrad):	%	0.00	0.00	0.00	0.00
c. Gamma Annual (10 mrad):	%	0.00	0.00	0.00	0.00
d. Beta Annual (20 mrad):	%	0.00	0.00	0.00	0.00

**B. IODINE RELEASES \*\***

1. Total I-131 Activity:	Ci	<LLD	<LLD	<LLD	<LLD
2. Average I-131 Release Rate:	uCi/sec	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**C. PARTICULATE (>8 day half-life) RELEASES \*\***

1. Total Particulate Activity:	Ci	<LLD	1.18E-06	1.36E-06	1.78E-07
2. Average Particulate Release Rate:	uCi/sec	0.00E+00	1.50E-07	1.71E-07	2.24E-08
3. Gross Alpha Activity for Quarter:	Ci	<LLD	<LLD	<LLD	<LLD

**D. TRITIUM RELEASES \*\***

1. Total Tritium Activity:	Ci	2.84E+00	7.26E-01	4.16E-01	5.99E-01
2. Average Tritium Release Rate:	uCi/sec	3.65E-01	9.23E-02	5.23E-02	7.53E-02

\* % of Tech. Spec. limits is based on the maximum release rate for the period considered.

\*\* Iodine, particulate, and tritium are expressed as a total limit. See Step E.

BYRON NUCLEAR POWER STATION  
UNIT 2 DOCKET NUMBER STN-50-455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

**GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES (CONT.)**

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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E. TOTAL OF IODINE, PARTICULATE (>8 day half-life), AND TRITIUM RELEASES

1. Total Activity:

Ci	2.84E+00	7.26E-01	4.16E-01	5.99E-01
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2. % of Tech. Spec. Limits

a. Any Organ (1500 mrem/yr):

%	0.00	0.00	0.00	0.00
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3. % of 10CFR50 Limit

a. Quarterly Any Organ  
(7.5 mrem):

%	0.02	0.01	0.01	0.01
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a. Annual Any Organ  
(15 mrem):

%	0.01	0.00	0.00	0.00
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**GASEOUS EFFLUENTS - VENT STACK RELEASES - BATCH MODE**

F. FISSION AND ACTIVATION GAS RELEASES

Ar-41:	Ci	7.17E-03	<LLD	<LLD	2.23E-04
Kr-85:	Ci	<LLD	<LLD	<LLD	<LLD
Kr-85m:	Ci	<LLD	<LLD	<LLD	2.01E-04
Kr-87:	Ci	<LLD	<LLD	<LLD	<LLD
Kr-88:	Ci	<LLD	<LLD	<LLD	<LLD
Xe-131m:	Ci	<LLD	<LLD	1.27E-03	<LLD
Xe-133:	Ci	1.01E-01	1.03E-01	6.85E-02	1.97E-01
Xe-133m:	Ci	4.28E-03	5.21E-04	7.00E-04	3.98E-03
Xe-135:	Ci	2.61E-03	9.27E-05	1.14E-04	1.24E-02
Xe-138:	Ci	<LLD	<LLD	<LLD	<LLD

BYRON NUCLEAR POWER STATION  
UNIT 2 DOCKET NUMBER STN-50-455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

**GASEOUS EFFLUENTS - VENT STACK RELEASES - BATCH MODE (CONT.)**

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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G. IODINE RELEASES

I-131:	Ci	*	*	*	*
I-133:	Ci	*	*	*	*
I-135:	Ci	*	*	*	*

\* Value reported as CONTINUOUS RELEASE MODE.

H. PARTICULATE (>8 day half-life) RELEASES

Sr-89:	Ci	*	*	*	*
Sr-90:	Ci	*	*	*	*

\* Value reported as CONTINUOUS RELEASE MODE.

**GASEOUS EFFLUENTS - VENT STACK RELEASES - CONTINUOUS MODE**

I. FISSION AND ACTIVATION GAS RELEASES

Xe-133:	Ci	1.04E-01	1.70E-01	2.07E-02	4.14E-02
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BYRON NUCLEAR POWER STATION  
UNIT 2 DOCKET NUMBER STN-50-455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

**GASEOUS EFFLUENTS - VENT STACK RELEASES - CONTINUOUS MODE (CONT.)**

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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J. IODINE RELEASES

I-131:	Ci	<LLD	<LLD	<LLD	<LLD
I-133:	Ci	6.73E-06	<LLD	<LLD	<LLD
I-135:	Ci	<LLD	<LLD	<LLD	<LLD

K. PARTICULATE (>8 day half-life) RELEASES

Sr-89:	Ci	<LLD	<LLD	<LLD	<LLD
Sr-90:	Ci	<LLD	<LLD	<LLD	<LLD
Co-60:	Ci	<LLD	1.18E-06	1.36E-06	1.78E-07

**LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES**

L. FISSION AND ACTIVATION PRODUCT RELEASES

1. Total Activity Released:	Ci	1.66E-02	3.37E-02	5.54E-02	3.68E-02
2. Average Concentration Released For Quarter:	uCi/ml	5.18E-09	1.04E-08	1.51E-08	1.12E-08

3. % of 10CFR50 Limits

a. Quarterly Whole Body (1.5 mrem):	%	0.04	0.03	0.04	0.05
b. Quarterly Any Organ (5.0 mrem):	%	0.01	0.02	0.02	0.02
c. Annual Whole Body (3.0 mrem):	%	0.02	0.02	0.02	0.03
d. Annual Any Organ (10.0 mrem):	%	0.00	0.01	0.01	0.01

BYRON NUCLEAR POWER STATION  
UNIT 2 DOCKET NUMBER STN-50-455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

**LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES (CONT.)**

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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M. TRITIUM

1. Total Activity Released:
2. Average Concentration Released For Quarter:
3. % of Tech Spec Limit (1.00E-2 uCi/ml):

Ci	3.03E+02	1.95E+02	3.22E+02	3.85E+02
uCi/ml	9.47E-05	6.04E-05	8.75E-05	1.17E-04
%	0.95	0.60	0.88	1.17

N. DISSOLVED NOBLE GASES

1. Total Activity Released:
2. Average Concentration Released For Quarter:
3. % of Tech. Reqt. Manual Limit (2.00E-4 uCi/ml):

Ci	2.64E-03	5.10E-03	8.91E-05	6.86E-04
uCi/ml	8.24E-10	1.58E-09	2.42E-11	2.09E-10
%	4.12E-04	7.90E-04	1.21E-05	1.04E-04

O. GROSS ALPHA

1. Total Activity Released:
2. Average Concentration Released For Quarter:

Ci	<LLD	<LLD	<LLD	<LLD
uCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00

P. VOLUME OF WASTE  
RELEASED PER UNIT:

liters	1.23E+06	1.47E+06	1.44E+06	1.70E+06
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Q. VOLUME OF DILUTION  
WATER PER UNIT:

liters	3.20E+09	3.23E+09	3.68E+09	3.29E+09
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**LIQUID EFFLUENTS - CONTINUOUS MODE**

R. LIQUID EFFLUENTS

- Fe-55:  
Sr-89:  
Sr-90:

\* Value reported as LIQUID EFFLUENTS - BATCH MODE

Ci	*	*	*	*
Ci	*	*	*	*
Ci	*	*	*	*

BYRON NUCLEAR POWER STATION  
UNIT 2 DOCKET NUMBER STN-50-455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

LIQUID EFFLUENTS - BATCH MODE

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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S. LIQUID EFFLUENTS

Fe-55:	Ci	3.15E-03	7.65E-04	5.00E-04	8.12E-03
Sr-89:	Ci	<LLD	<LLD	<LLD	<LLD
Sr-90:	Ci	<LLD	<LLD	<LLD	<LLD
H-3:	Ci	3.03E+02	1.95E+02	3.22E+02	3.85E+02
Ar-41:	Ci	<LLD	<LLD	<LLD	<LLD
Cr-51:	Ci	<LLD	1.17E-04	1.72E-03	3.59E-05
Mn-54:	Ci	1.19E-04	4.67E-05	2.34E-04	4.40E-05
Fe-59:	Ci	2.78E-06	7.92E-06	<LLD	<LLD
Co-57:	Ci	5.01E-05	1.14E-05	1.80E-05	5.31E-06
Co-58:	Ci	7.51E-03	3.90E-03	3.66E-03	7.26E-04
Co-60:	Ci	1.64E-03	1.40E-03	2.78E-03	2.12E-03
Zn-65:	Ci	<LLD	<LLD	<LLD	<LLD
Kr-85:	Ci	2.05E-03	3.66E-03	<LLD	3.70E-04
Kr-85m:	Ci	<LLD	<LLD	<LLD	<LLD
Kr-87:	Ci	<LLD	<LLD	<LLD	<LLD
Kr-88:	Ci	<LLD	<LLD	<LLD	<LLD
Sr-92:	Ci	3.89E-06	<LLD	<LLD	<LLD
Nb-95:	Ci	1.50E-05	8.35E-06	1.12E-04	<LLD
Zr-95:	Ci	6.11E-06	<LLD	<LLD	<LLD
Zr-97:	Ci	<LLD	<LLD	<LLD	<LLD
Mo-99:	Ci	<LLD	<LLD	<LLD	<LLD
Tc-99m:	Ci	<LLD	<LLD	<LLD	<LLD
Tc-104:	Ci	<LLD	<LLD	<LLD	<LLD
Ag-110m:	Ci	2.81E-05	1.04E-05	1.19E-05	1.48E-04
Sn-113:	Ci	<LLD	<LLD	<LLD	<LLD
Te-121m:	Ci	<LLD	<LLD	<LLD	<LLD
Te-123m:	Ci	5.14E-05	5.10E-04	1.43E-05	3.42E-04
Te-125m:	Ci	2.80E-03	2.38E-02	3.54E-03	2.75E-02
Sb-122:	Ci	<LLD	9.24E-06	<LLD	<LLD
Sb-124:	Ci	3.73E-04	2.51E-04	2.87E-03	3.29E-05
Sb-125:	Ci	3.97E-03	3.12E-03	4.04E-02	5.97E-03
Sb-126:	Ci	<LLD	7.97E-06	<LLD	<LLD



BYRON NUCLEAR POWER STATION  
UNIT 2 DOCKET NUMBER STN-50-455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

**LIQUID EFFLUENTS - BATCH MODE (CONT.)**

UNITS	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
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S. LIQUID EFFLUENTS (CONT.)

I-131:	Ci	<LLD	1.62E-05	1.81E-06	3.25E-06
I-132:	Ci	<LLD	2.49E-04	<LLD	<LLD
I-133:	Ci	<LLD	2.37E-06	<LLD	<LLD
I-135:	Ci	<LLD	<LLD	<LLD	<LLD
Xe-131m:	Ci	<LLD	<LLD	<LLD	<LLD
Xe-133:	Ci	5.69E-04	1.37E-03	8.91E-05	3.16E-04
Xe-133m:	Ci	<LLD	<LLD	<LLD	<LLD
Xe-135:	Ci	1.14E-05	7.67E-05	<LLD	<LLD
Xe-135m:	Ci	<LLD	<LLD	<LLD	<LLD
Xe-138:	Ci	<LLD	<LLD	<LLD	<LLD
Cs-134:	Ci	<LLD	<LLD	<LLD	<LLD
Cs-137:	Ci	<LLD	<LLD	<LLD	<LLD
Ba-140:	Ci	<LLD	<LLD	<LLD	<LLD
La-140:	Ci	<LLD	<LLD	<LLD	<LLD
Ce-141:	Ci	<LLD	<LLD	<LLD	<LLD
Ce-144:	Ci	<LLD	<LLD	<LLD	<LLD
Sr-85:	Ci	9.09E-06	1.61E-05	<LLD	<LLD
Te-132:	Ci	<LLD	2.17E-04	3.71E-05	<LLD
Ba-133:	Ci	<LLD	3.19E-06	<LLD	<LLD
Na-24:	Ci	<LLD	<LLD	2.35E-05	<LLD

T. 10CFR20 PUBLIC TEDE COMPLIANCE

1. % OF 10CFR20 TEDE LIMIT:  
(100 mrem/yr)

%	0.00	0.00	0.00	0.00
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U. 40CFR190 Compliance

1. % of 40CFR190 DDE (25 mrem/yr)
2. % of 40CFR190 CDE (25 mrem/yr)
3. % of 40CFR190 CDE (Thyroid)  
(75 mrem/yr)

%	0.00	0.00	0.00	0.00
%	0.00	0.00	0.00	0.00
%	0.00	0.00	0.00	0.00
%	0.00	0.00	0.00	0.00

BYRON NUCLEAR POWER STATION  
UNIT 1/2, DOCKET NUMBER STN-50-454/455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

SOLID RADIOACTIVE WASTE FOR BURIAL 1ST QUARTER, 2001

DATE	DISPOSITION OF MATERIAL (DESCRIPTION, CLASS, TYPE AND SOLIDIFYING AGENT)	MODE OF TRANSPORT	DESTINATION	VOLUME PER SHIPMENT	Curies* Per Shipment
01/04/2001	MECHANICAL FILTERS, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, RQ, CLASS C, TYPE A CONTAINER, NONE	EXCLUSIVE-USE	OAK RIDGE, TN	5.83E+00	3.60E+01
01/18/2001	DRY ACTIVE WASTE, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, CLASS A, STRONG-TIGHT CONTAINER, NONE	EXCLUSIVE-USE	OAK RIDGE, TN	3.63E+01	2.24E-01
03/26/2001	DRY ACTIVE WASTE, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, CLASS A, STRONG-TIGHT CONTAINER, NONE	EXCLUSIVE-USE	OAK RIDGE, TN	7.25E+01	1.52E-02
Quarterly Totals				1.15E+02	3.62E+01
			Number of Shipments:	3	
				CUBIC M	CURIES

\* Calculated using measured ratios

BYRON NUCLEAR POWER STATION  
UNIT 1/2, DOCKET NUMBER STN-50-454/455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

SOLID RADIOACTIVE WASTE FOR BURIAL 2ND QUARTER, 2001

DATE	DISPOSITION OF MATERIAL (DESCRIPTION, CLASS, TYPE AND SOLIDIFYING AGENT)	MODE OF TRANSPORT	DESTINATION	VOLUME PER SHIPMENT	Curies* Per Shipment
04/02/2001	MIXED BED ION-EXCHANGE MEDIA, nos, 7, UN2982, RQ, CLASS B, TYPE B CONTAINER, NONE	EXCLUSIVE-USE	BARNWELL, SC	3.41E+00	1.52E+02
05/09/2001	DRY ACTIVE WASTE, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, MIXED WASTE, D001, F005, PAINT SOLVENTS CONTAINING METHYL ETHYL KETONE, (RQ-D001), CLASS A, STRONG-TIGHT CONTAINER, NONE	EXCLUSIVE-USE	RICHLAND, WA	3.63E+01	8.20E-02
05/24/2001	DRY ACTIVE WASTE, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, CLASS A, STRONG-TIGHT CONTAINER, NONE	EXCLUSIVE-USE	OAK RIDGE, TN	7.25E+01	1.16E-01
06/07/2001	DRY ACTIVE WASTE, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, CLASS A, STRONG TIGHT CONTAINER, NONE	EXCLUSIVE-USE	OAK RIDGE, TN	3.63E+01	6.70E-02
06/20/2001	MIXED BED ION-EXCHANGE MEDIA, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, CLASS A, TYPE A CONTAINER, NONE	EXCLUSIVE-USE	BARNWELL, SC	5.83E+00	3.51E+01
Quarterly Totals				1.54E+02	1.87E+02
* Calculated using measured ratios				CUBIC M	CURIES

Number of Shipments: 5

BYRON NUCLEAR POWER STATION  
UNIT 1/2, DOCKET NUMBER STN-50-454/455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

SOLID RADIOACTIVE WASTE FOR BURIAL 3RD QUARTER, 2001

DATE	DISPOSITION OF MATERIAL (DESCRIPTION, CLASS, TYPE AND SOLIDIFYING AGENT)	MODE OF TRANSPORT	DESTINATION	VOLUME PER SHIPMENT	Curies* Per Shipment
07/11/2001	DRY ACTIVE WASTE, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, CLASS A, STRONG-TIGHT CONTAINER, NONE	EXCLUSIVE-USE	OAK RIDGE, TN	3.63E+01	3.68E-01
08/15/2001	MIXED BED ION-EXCHANGE MEDIA, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, CLASS A, STRONG-TIGHT CONTAINER, NONE	EXCLUSIVE-USE	ERWIN, TN	5.87E+00	1.62E+01
08/31/2001	OIL, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, CLASS A, STRONG-TIGHT CONTAINER, NONE	EXCLUSIVE-USE	RICHLAND, WA	2.40E+01	5.46E-03
08/31/2001	DRY ACTIVE WASTE, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, CLASS A, STRONG TIGHT CONTAINER, NONE	EXCLUSIVE-USE	OAK RIDGE, TN	7.25E+01	6.00E-02
Quarterly Totals				1.39E+02	1.66E+01
			Number of Shipments: 4	CUBIC M	CURIES

\* Calculated using measured ratios

BYRON NUCLEAR POWER STATION  
UNIT 1/2, DOCKET NUMBER STN-50-454/455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
JANUARY, 2001 THROUGH DECEMBER, 2001

SOLID RADIOACTIVE WASTE FOR BURIAL 4TH QUARTER, 2001

DATE	DISPOSITION OF MATERIAL (DESCRIPTION, CLASS, TYPE AND SOLIDIFYING AGENT)	MODE OF TRANSPORT	DESTINATION	VOLUME PER SHIPMENT	Curies* Per Shipment
10/09/2001	DRY ACTIVE WASTE, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, CLASS A, STRONG-TIGHT CONTAINER, NONE	EXCLUSIVE-USE	OAK RIDGE, TN	3.63E+01	3.27E-05
10/23/2001	MIXED BED ION-EXCHANGE MEDIA, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, RQ, CLASS A, STRONG TIGHT CONTAINER, NONE	EXCLUSIVE-USE	KINGSTON, TN	4.84E+00	2.00E+01
11/07/2001	DRY ACTIVE WASTE, MIXED BED ION- EXCHANGE MEDIA, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, CLASS A, STRONG-TIGHT CONTAINER, NONE	EXCLUSIVE-USE	OAK RIDGE, TN	3.63E+01	1.18E-03
11/15/2001	DRY ACTIVE WASTE, LOW SPECIFIC ACTIVITY, nos, 7, UN2912, CLASS A, STRONG-TIGHT CONTAINER, NONE	EXCLUSIVE-USE	OAK RIDGE, TN	7.25E+01	1.80E-01
Quarterly Totals				1.50E+02	2.02E+01
			Number of Shipments:	4	
				CUBIC M	CURIES

\* Calculated using measured ratios

## Solid Radioactive Waste for Burial, Addendum

### A. Estimated Solid Waste Composition

Resins, Filters, Evap Bottoms		
Percent		
Nuclide	Abundance	uCi/ml
H-3	0.896	8.99E-02
Be-7	2.256	2.26E-01
C-14	0.275	2.76E-02
Cr-51	0.362	3.63E-02
Mn-54	5.499	5.52E-01
Fe-55	24.989	2.51E+00
Fe-59	0.081	8.13E-03
Co-57	0.519	5.21E-02
Co-58	35.164	3.53E+00
Co-60	13.361	1.34E+00
Ni-63	14.888	1.49E+00
Zn-65	0.143	1.44E-02
Sr-90	0.008	8.03E-04
Zr-95	0.171	1.72E-02
Nb-95	0.223	2.24E-02
Mo-99	0.000	2.24E-07
Tc-99	0.001	1.23E-04
Sn-113	0.030	3.01E-03
Sb-125	0.398	4.00E-02
I-129	0.001	1.42E-04
I-131	0.000	1.49E-06
Cs-134	0.001	1.00E-04
Cs-137	0.157	1.58E-02
La-140	0.004	4.02E-04
Ce-144	0.566	5.68E-02
Pu-238	0.001	8.97E-05
Pu-239	0.000	4.40E-05
Pu-241	0.008	8.03E-04
Am-241	0.001	5.42E-05
Cm-242	0.000	1.52E-05
Cm-243	0.000	2.14E-08

Dry Active Waste		
Percent		
Nuclide	Abundance	uCi/ml
H-3	2.779	6.29E-05
C-14	0.073	1.65E-06
Cr-51	34.093	7.71E-04
Mn-54	1.030	2.33E-05
Fe-55	7.353	1.66E-04
Fe-59	1.731	3.92E-05
Co-57	0.065	1.47E-06
Co-58	33.881	7.67E-04
Co-60	3.748	8.48E-05
Ni-63	3.976	9.00E-05
Zn-65	0.162	3.67E-06
Sr-90	0.000	2.13E-09
Zr-95	2.152	4.87E-05
Zr-97	0.008	1.81E-07
Nb-95	2.840	6.43E-05
Mo-99	0.011	2.49E-07
Tc-99	0.000	1.11E-09
Ag-110m	0.041	9.28E-07
Sn-113	0.066	1.49E-06
Sb-125	0.077	1.74E-06
Te-123m	0.023	5.20E-07
Te-125m	4.950	1.12E-04
I-129	0.000	1.28E-09
Cs-134	0.000	5.08E-09
Cs-137	0.048	1.09E-06
Ce-144	0.742	1.68E-05
Hf-181	0.149	3.37E-06
Pu-238	0.000	7.43E-10
Pu-239	0.000	3.62E-10
Pu-241	0.002	4.88E-08
Am-241	0.000	4.50E-10
Cm-242	0.000	5.34E-10
Cm-243	0.000	5.67E-10

Other (Contaminated Oil)		
Percent		
Nuclide	Abundance	uCi/ml
H-3	66.807	2.18E-05
Be-7	1.217	3.97E-07
C-14	0.130	4.24E-08
Mn-54	0.606	1.98E-07
Fe-55	12.526	4.08E-06
Co-58	0.902	2.94E-07
Co-60	6.523	2.13E-06
Ni-63	7.059	2.30E-06
Sr-90	0.002	6.52E-10
Tc-99	0.000	2.84E-11
I-129	0.000	3.28E-11
Cs-134	0.098	3.19E-08
Cs-137	3.646	1.19E-06
Ce-144	0.480	1.56E-07
Pu-238	0.000	2.06E-11
Pu-239	0.000	1.01E-11
Pu-241	0.004	1.24E-09
Am-241	0.000	1.25E-11
Cm-242	0.000	1.08E-11
Cm-243	0.000	3.28E-11

BYRON NUCLEAR POWER STATION  
UNIT 1/2 DOCKET NUMBER STN-50-454/455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
January, 2001 THROUGH December, 2001

- A. Changes to Radioactive Waste Process Control Program for 2001 were primarily administrative in nature. Operationally, the Process Control Program remains unchanged.
- B. Error Analysis

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.

1. Gaseous Effluents

Sampling error = 1 to 3.5%  
Calibration error = 5%  
Counting statistics error = 5%  
Vent stack flowrates error = 1.5%

---

Total error = 7 – 8%

2. Liquid Effluents

Sampling error = 1%  
Calibration error = 5%  
Sample volume error = 1%  
Discharged volume error = 2%  
Counting statistics error = 0.41%

---

Total error = 5.6%

3. Waste Resin

Sample prep = 5%  
Sampling error = 1%  
Counting statistic error = 1%  
Weight error = 0.5%  
Calibration error = 5%

---

Total error = 7.2%

4. DAW, Mechanical Filters, and Contaminated Metal

Counting statistic error = 1%  
Calibration error = 5%  
Instrument calibration error = 10%

---

Total error = 11%

BYRON NUCLEAR POWER STATION  
UNIT 1/2 DOCKET NUMBER STN-50-454/455  
RADIOACTIVE EFFLUENT RELEASE REPORT  
January, 2001 THROUGH December, 2001

- C. Meteorological and environmental impact information is reported in the Station Annual Radiological Environmental Operating Report as required by Technical Specification 5.6.2.
- D. No limits were exceeded in liquid hold up tanks as stated in Technical Specification 5.5.12 or in waste gas decay tanks as stated in Technical Specification 5.5.12.
- E. There were no irradiated fuel shipments during this period.
- F. There were no elevated releases. All releases are considered vent or ground level releases.
- G. No liquid or Gaseous Effluent Monitor exceeded the specified LCO time limit.
- H. In the third quarter of 2001, the REMP well location BY-14-1, was added to replace well sampling location BY-14. The original collection site had its electrical service discontinued to the pump, and samples were no longer able to be acquired. The new location is in Sector H at a distance of 1.6 km.
- J. Attached are Offsite Dose Calculations for January through December of 2001.



## Attachment A, 2001 Radioactive Effluent Release Report

Lower Limit of Detection  
Gaseous Effluents

Nuclides	LLD (Ci/ml)
H3	4.03E-14
Ar41	6.25E-12
Cr51	3.29E-18
Mn54	7.63E-19
Co58	5.76E-19
Fe59	1.70E-18
Co60	1.25E-18
Zn65	1.84E-18
Kr85m	2.39E-18
Kr87	5.79E-18
Kr88	7.10E-18
Sr89	4.80E-18
Sr-90	8.46E-19
Mo99	3.38E-19
I131	6.13E-19
Xe131m	1.06E-16
I133	7.04E-08
Xe133	7.13E-18
Xe133m	2.20E-17
Cs134	5.19E-19
I135	3.83E-18
Xe135	2.13E-18
Cs137	7.05E-19
Xe138	8.41E-18
Ba140	2.06E-18
La140	3.51E-19
Ce141	5.86E-19
Ce144	2.27E-18
Gross Alpha	1.76E-18

Lower Limit of Detection  
Aqueous Effluents

Nuclides	LLD (Ci/ml)
H3	1.68E-12
Na24	4.63E-14
Cr51	1.73E-13
Mn54	5.25E-14
Fe55	2.10E-13
Co57	1.89E-14
Co58	3.81E-14
Fe59	1.05E-13
Co60	7.62E-14
Zn65	1.13E-13
Sr85	2.43E-14
Sr89	1.17E-14
Sr-90	2.70E-15
Sr92	5.11E-14
Nb95	3.15E-14
Zr95	7.77E-14
Mo99	2.41E-14
Ag110m	2.83E-14
Sb122	4.79E-14
Te123m	1.95E-14
Sb124	1.11E-13
Sb125	1.08E-13
Te125m	6.93E-12
Sb126	1.81E-14
I131	2.52E-14
I132	4.78E-14
Te132	2.13E-14
I133	3.52E-14
Xe133	8.11E-14
Cs134	5.25E-14
Xe135	2.49E-14
Cs137	5.36E-14
Ba140	8.96E-14
La140	5.21E-14
Ce141	4.75E-14
Ce144	1.67E-13
Gross Alpha	6.76E-14

\*\*\*\*\*  
\* DELIVER TO HEALTH PHYSICS \*  
\*\*\*\*\*

AIRBORNE Effluents- 10CFR50 Listing

24-mar-2002 07:34:14

STATION: BYRON STATION  
UNIT: 1  
PERIOD: 01/01/01 12/31/01  
NAME: THOMPSON  
REPORT: ANNUAL  
MODE: ACTUAL

BYRON STATION UNIT ONE

ACTUAL 2001

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 INFANT RECEPTOR

TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
GAMMA AIR (MRAD)	8.65E-07 (SSE )	1.23E-06 (SSE )	8.39E-07 (SSE )	1.70E-06 (SSE )	4.63E-06 (SSE )
BETA AIR (MRAD)	3.34E-06 (SSE )	4.13E-06 (SSE )	2.03E-06 (SSE )	4.99E-06 (SSE )	1.45E-05 (SSE )
TOT. BODY (MREM)	6.11E-07 (SSE )	8.76E-07 (SSE )	6.10E-07 (SSE )	1.22E-06 (SSE )	3.32E-06 (SSE )
SKIN (MREM)	1.71E-06 (SSE )	2.24E-06 (SSE )	1.40E-06 (SSE )	3.14E-06 (SSE )	8.50E-06 (SSE )
ORGAN (MREM)	3.51E-04 (NE )	1.10E-04 (NE )	2.20E-04 (NE )	3.07E-04 (NE )	9.88E-04 (NE )
	LIVER THYROID KIDNEY LUNG GI_LLI	LUNG	LIVER THYROID KIDNEY LUNG GI_LLI	LIVER THYROID KIDNEY LUNG GI_LLI	LUNG

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

COMPLIANCE STATUS - 10CFR 50 APP. I  
 INFANT 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	0.00	0.00	0.00	0.00	15.0	0.01
		LIVER THYROID KIDNEY LUNG GI_LLI	LUNG	LIVER THYROID KIDNEY LUNG GI_LLI	LIVER THYROID KIDNEY LUNG GI_LLI		LUNG

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT ONE

ACTUAL 2001  
 MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 CHILD RECEPTOR

TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
GAMMA AIR (MRAD)	8.65E-07 (SSE )	1.23E-06 (SSE )	8.39E-07 (SSE )	1.70E-06 (SSE )	4.63E-06 (SSE )
BETA AIR (MRAD)	3.34E-06 (SSE )	4.13E-06 (SSE )	2.03E-06 (SSE )	4.99E-06 (SSE )	1.45E-05 (SSE )
TOT. BODY (MREM)	6.11E-07 (SSE )	8.76E-07 (SSE )	6.10E-07 (SSE )	1.22E-06 (SSE )	3.32E-06 (SSE )
SKIN (MREM)	1.71E-06 (SSE )	2.24E-06 (SSE )	1.40E-06 (SSE )	3.14E-06 (SSE )	8.50E-06 (SSE )
ORGAN (MREM)	2.47E-04 (NE )	2.56E-04 (SSE )	8.64E-04 (SSE )	3.40E-04 (S )	1.53E-03 (SE )
	LIVER THYROID KIDNEY LUNG GI_LLI	LUNG	LIVER THYROID KIDNEY LUNG GI_LLI	LIVER THYROID KIDNEY LUNG GI_LLI	LUNG

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

COMPLIANCE STATUS - 10CFR 50 APP. I  
 CHILD 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	0.00	0.00	0.01	0.00	15.0	0.01
		LIVER THYROID KIDNEY LUNG GI_LLI	LUNG	LIVER THYROID KIDNEY LUNG GI_LLI	LIVER THYROID KIDNEY LUNG GI_LLI		LUNG

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT ONE

ACTUAL 2001

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 TEENAGER RECEPTOR

TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
GAMMA AIR (MRAD)	8.65E-07 (SSE )	1.23E-06 (SSE )	8.39E-07 (SSE )	1.70E-06 (SSE )	4.63E-06 (SSE )
BETA AIR (MRAD)	3.34E-06 (SSE )	4.13E-06 (SSE )	2.03E-06 (SSE )	4.99E-06 (SSE )	1.45E-05 (SSE )
TOT. BODY (MREM)	6.11E-07 (SSE )	8.76E-07 (SSE )	6.10E-07 (SSE )	1.22E-06 (SSE )	3.32E-06 (SSE )
SKIN (MREM)	1.71E-06 (SSE )	2.24E-06 (SSE )	1.40E-06 (SSE )	3.14E-06 (SSE )	8.50E-06 (SSE )
ORGAN (MREM)	1.61E-04 (NE )	1.70E-04 (SE )	5.63E-04 (SSE )	2.44E-04 (S )	1.04E-03 (S )
	LIVER THYROID KIDNEY LUNG GI_LLI	LUNG	LIVER THYROID KIDNEY LUNG GI_LLI	LIVER THYROID KIDNEY LUNG GI_LLI	LUNG

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

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	0.00	0.00	0.01	0.00	15.0	0.01
		LIVER THYROID KIDNEY LUNG GI_LLI	LUNG	LIVER THYROID KIDNEY LUNG GI_LLI	LIVER THYROID KIDNEY LUNG GI_LLI		LUNG

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT ONE

ACTUAL 2001  
 MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 ADULT RECEPTOR

TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
GAMMA AIR (MRAD)	8.65E-07 (SSE )	1.23E-06 (SSE )	8.39E-07 (SSE )	1.70E-06 (SSE )	4.63E-06 (SSE )
BETA AIR (MRAD)	3.34E-06 (SSE )	4.13E-06 (SSE )	2.03E-06 (SSE )	4.99E-06 (SSE )	1.45E-05 (SSE )
TOT. BODY (MREM)	6.11E-07 (SSE )	8.76E-07 (SSE )	6.10E-07 (SSE )	1.22E-06 (SSE )	3.32E-06 (SSE )
SKIN (MREM)	1.71E-06 (SSE )	2.24E-06 (SSE )	1.40E-06 (SSE )	3.14E-06 (SSE )	8.50E-06 (SSE )
ORGAN (MREM)	2.24E-04 (S )	1.69E-04 (S )	5.02E-04 (SE )	2.93E-04 (S )	1.17E-03 (S )
	LIVER THYROID KIDNEY LUNG GI_LLI	GI_LLI	LIVER THYROID KIDNEY LUNG GI_LLI	LIVER THYROID KIDNEY LUNG GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

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	0.00	0.00	0.01	0.00	15.0	0.01
		LIVER THYROID KIDNEY LUNG GI_LLI	GI_LLI	LIVER THYROID KIDNEY LUNG GI_LLI	LIVER THYROID KIDNEY LUNG GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

\*\*\*\*\*  
\* DELIVER TO HEALTH PHYSICS \*  
\*\*\*\*\*

AQUATIC Effluents- 10CFR50 Listing

24-mar-2002 07:39:32

STATION: BYRON STATION  
UNIT: 1  
PERIOD: 01/01/01 12/31/01  
NAME: THOMPSON  
REPORT: ANNUAL  
MODE: ACTUAL

BYRON STATION UNIT ONE

ACTUAL 2001  
 MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 INFANT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	5.23E-04	3.36E-04	5.55E-04	6.63E-04	2.08E-03
INTERNAL ORGAN	5.23E-04	3.37E-04	5.55E-04	6.64E-04	2.08E-03
	GI_LLI	THYROID	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

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	0.03	0.02	0.04	0.04	3.0	0.07
CRIT. ORGAN (MREM)	5.0	0.01	0.01	0.01	0.01	10.0	0.02
		GI_LLI	THYROID	GI_LLI	GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995



BYRON STATION UNIT ONE

2001 ANNUAL REPORT  
 PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM \*  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 INFANT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	5.23E-04	3.36E-04	5.55E-04	6.63E-04	2.08E-03
INTERNAL ORGAN	5.23E-04	3.37E-04	5.55E-04	6.64E-04	2.08E-03
	GI_LLI	THYROID	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL BODY	4.0 MREM	0.052
INTERNAL ORGAN	4.0 MREM	0.052

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 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT ONE

ACTUAL 2001  
 MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 CHILD RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	6.00E-04	4.02E-04	6.37E-04	7.77E-04	2.42E-03
INTERNAL ORGAN	6.25E-04	5.23E-04	7.13E-04	9.06E-04	2.77E-03
	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

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	0.04	0.03	0.04	0.05	3.0	0.08
CRIT. ORGAN (MREM)	5.0	0.01	0.01	0.01	0.02	10.0	0.03
		GI_LLI	GI_LLI	GI_LLI	GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT ONE

2001 ANNUAL REPORT

PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM \*  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 CHILD RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	5.26E-04	3.38E-04	5.58E-04	6.67E-04	2.09E-03
INTERNAL ORGAN	5.26E-04	3.40E-04	5.59E-04	6.70E-04	2.10E-03
	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL BODY	4.0 MREM	0.052
INTERNAL ORGAN	4.0 MREM	0.052

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 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT ONE

ACTUAL 2001  
 MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 TEENAGER RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	3.61E-04	2.44E-04	3.83E-04	4.69E-04	1.46E-03
INTERNAL ORGAN	4.36E-04	5.66E-04	5.99E-04	8.10E-04	2.41E-03
	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

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	0.02	0.02	0.03	0.03	3.0	0.05
CRIT. ORGAN(MREM)	5.0	0.01	0.01	0.01	0.02	10.0	0.02
		GI_LLI	GI_LLI	GI_LLI	GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT ONE

2001 ANNUAL REPORT

PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM \*  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 TEENAGER RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	2.74E-04	1.76E-04	2.91E-04	3.48E-04	1.09E-03
INTERNAL ORGAN	2.76E-04	1.79E-04	2.93E-04	3.51E-04	1.10E-03
	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL BODY	4.0 MREM	0.027
INTERNAL ORGAN	4.0 MREM	0.027

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 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT ONE

ACTUAL 2001  
 MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 ADULT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	5.01E-04	3.34E-04	5.31E-04	6.46E-04	2.01E-03
INTERNAL ORGAN	6.07E-04	7.53E-04	8.38E-04	1.09E-03	3.28E-03
	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

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	0.03	0.02	0.04	0.04	3.0	0.07
CRIT. ORGAN (MREM)	5.0	0.01	0.02	0.02	0.02	10.0	0.03
		GI_LLI	GI_LLI	GI_LLI	GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT ONE

2001 ANNUAL REPORT

PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM \*  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 ADULT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL	3.89E-04	2.50E-04	4.13E-04	4.94E-04	1.55E-03
BODY					
INTERNAL	3.91E-04	2.54E-04	4.15E-04	4.98E-04	1.56E-03
ORGAN	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL	4.0 MREM	0.039
BODY		
INTERNAL	4.0 MREM	0.039
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 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

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\* DELIVER TO HEALTH PHYSICS \*  
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24-mar-2002 07:29:59

Total Effective Dose Equivalent - 10CFR20 Listing

STATION: BYRON STATION  
UNIT: 1  
PERIOD: 01/01/01 12/31/01  
NAME: THOMPSON  
REPORT: ANNUAL  
MODE: ACTUAL

For ADULT dose calculations, the included pathways are:

- INHALATION
- MILK
- PRODUCE
- VEGETABLES
- MEAT
- GROUND DEPOSITION
- FISH
- WATER
- SKYSHINE
- WHOLE BODY

Airborne Effluents are complete from 01/01/01 to 12/31/01  
Aquatic Effluents are complete from 01/01/01 to 12/31/01



BYRON STATION UNIT ONE

10 CFR 20 COMPLIANCE ASSESSMENT

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

CALCULATED 03/24/02

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

Total Effective Dose Equivalent, mrem/yr	2.60E-03
10 CFR 20.1301 (a)(1) limit	mrem/yr 100.0
% of limit	0.00

Compliance Summary - 10CFR20

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	% of Limit
TEDE	5.30E-04	4.86E-04	7.91E-04	7.98E-04	0.00

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
ODCM SOFTWARE VERSION 1.1 January 1995  
ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT ONE

10 CFR 20 COMPLIANCE ASSESSMENT

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

CALCULATED 03/24/02

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

		Dose (mrem)	Limit (mrem)	% of Limit
Whole Body (DDE)	Plume	3.32E-06		
	Skyshine	0.00E+00		
	Ground	4.65E-06		
	Total	7.97E-06	25.0	0.00
Organ Dose (CDE)	Thyroid	2.30E-03	75.0	0.00
	Gonads	2.32E-03	25.0	0.01
	Breast	2.24E-03	25.0	0.01
	Lung	2.23E-03	25.0	0.01
	Marrow	2.62E-03	25.0	0.01
	Bone	6.34E-03	25.0	0.03
	Remainder	2.79E-03	25.0	0.01
	CEDE	2.60E-03		
TEDE	2.60E-03	100.0	0.00	

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

\*\*\*\*\*  
\* DELIVER TO HEALTH PHYSICS \*  
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AIRBORNE Effluents- 10CFR50 Listing

24-mar-2002 09:19:43

STATION: BYRON STATION  
UNIT: 2  
PERIOD: 01/01/01 12/31/01  
NAME: THOMPSON  
REPORT: ANNUAL  
MODE: ACTUAL

BYRON STATION UNIT TWO

ACTUAL 2001  
 MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 INFANT RECEPTOR

TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
GAMMA AIR (MRAD)	1.35E-06 (SSE )	1.01E-06 (SSE )	3.38E-07 (SSE )	1.16E-06 (SSE )	3.85E-06 (SSE )
BETA AIR (MRAD)	3.57E-06 (SSE )	4.08E-06 (SSE )	1.37E-06 (SSE )	4.10E-06 (SSE )	1.31E-05 (SSE )
TOT. BODY (MREM)	9.74E-07 (SSE )	7.13E-07 (SSE )	2.38E-07 (SSE )	8.24E-07 (SSE )	2.75E-06 (SSE )
SKIN (MREM)	2.34E-06 (SSE )	1.98E-06 (SSE )	6.73E-07 (SSE )	2.33E-06 (SSE )	7.33E-06 (SSE )
ORGAN (MREM)	1.24E-03 (NE )	3.24E-04 (NE )	1.85E-04 (NE )	3.20E-04 (NE )	2.07E-03 (NE )

THYROID LUNG LUNG LUNG THYROID  
 THIS IS A REPORT FOR THE CALENDAR YEAR 2001

COMPLIANCE STATUS - 10CFR 50 APP. I  
 INFANT 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	0.02	0.00	0.00	0.00	15.0	0.01

THYROID LUNG LUNG LUNG THYROID

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT TWO

ACTUAL 2001  
 MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 CHILD RECEPTOR

TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
GAMMA AIR (MRAD)	1.35E-06 (SSE )	1.01E-06 (SSE )	3.38E-07 (SSE )	1.16E-06 (SSE )	3.85E-06 (SSE )
BETA AIR (MRAD)	3.57E-06 (SSE )	4.08E-06 (SSE )	1.37E-06 (SSE )	4.10E-06 (SSE )	1.31E-05 (SSE )
TOT. BODY (MREM)	9.74E-07 (SSE )	7.13E-07 (SSE )	2.38E-07 (SSE )	8.24E-07 (SSE )	2.75E-06 (SSE )
SKIN (MREM)	2.34E-06 (SSE )	1.98E-06 (SSE )	6.73E-07 (SSE )	2.33E-06 (SSE )	7.33E-06 (SSE )
ORGAN (MREM)	8.77E-04 (NE )	7.59E-04 (SSE )	7.25E-04 (SSE )	6.65E-04 (SE )	2.60E-03 (S )

THYROID      LUNG              GI\_LLI              GI\_LLI              GI\_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

COMPLIANCE STATUS - 10CFR 50 APP. I  
 CHILD 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	0.01	0.01	0.01	15.0	0.02

THYROID      LUNG              GI\_LLI              GI\_LLI              GI\_LLI

RESULTS BASED UPON:      ODCM ANNEX REVISION      1.3 MARCH 1996  
                                  ODCM SOFTWARE VERSION      1.1 January 1995  
                                  ODCM DATABASE VERSION      1.1 January 1995

BYRON STATION UNIT TWO

ACTUAL 2001

MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES

PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02

TEENAGER RECEPTOR

TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
GAMMA AIR (MRAD)	1.35E-06 (SSE )	1.01E-06 (SSE )	3.38E-07 (SSE )	1.16E-06 (SSE )	3.85E-06 (SSE )
BETA AIR (MRAD)	3.57E-06 (SSE )	4.08E-06 (SSE )	1.37E-06 (SSE )	4.10E-06 (SSE )	1.31E-05 (SSE )
TOT. BODY (MREM)	9.74E-07 (SSE )	7.13E-07 (SSE )	2.38E-07 (SSE )	8.24E-07 (SSE )	2.75E-06 (SSE )
SKIN (MREM)	2.34E-06 (SSE )	1.98E-06 (SSE )	6.73E-07 (SSE )	2.33E-06 (SSE )	7.33E-06 (SSE )
ORGAN (MREM)	5.72E-04 (NE )	5.02E-04 (SE )	4.74E-04 (SSE )	4.40E-04 (SE )	1.85E-03 (S )

THYROID      LUNG              GI\_LLI              GI\_LLI              GI\_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

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	0.01	0.01	0.01	0.01	15.0	0.01

THYROID      LUNG              GI\_LLI              GI\_LLI              GI\_LLI

RESULTS BASED UPON:      ODCM ANNEX REVISION      1.3 MARCH 1996  
                                  ODCM SOFTWARE VERSION 1.1 January 1995  
                                  ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT TWO

ACTUAL 2001  
 MAXIMUM DOSES RESULTING FROM AIRBORNE RELEASES  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 ADULT RECEPTOR

TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
GAMMA AIR (MRAD)	1.35E-06 (SSE )	1.01E-06 (SSE )	3.38E-07 (SSE )	1.16E-06 (SSE )	3.85E-06 (SSE )
BETA AIR (MRAD)	3.57E-06 (SSE )	4.08E-06 (SSE )	1.37E-06 (SSE )	4.10E-06 (SSE )	1.31E-05 (SSE )
TOT. BODY (MREM)	9.74E-07 (SSE )	7.13E-07 (SSE )	2.38E-07 (SSE )	8.24E-07 (SSE )	2.75E-06 (SSE )
SKIN (MREM)	2.34E-06 (SSE )	1.98E-06 (SSE )	6.73E-07 (SSE )	2.33E-06 (SSE )	7.33E-06 (SSE )
ORGAN (MREM)	7.95E-04 (S )	4.98E-04 (S )	4.23E-04 (SE )	4.54E-04 (S )	2.15E-03 (S )
	THYROID	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

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	0.01	0.01	0.01	15.0	0.01

THYROID      GI\_LLI      GI\_LLI      GI\_LLI      GI\_LLI

RESULTS BASED UPON:      ODCM ANNEX REVISION      1.3 MARCH 1996  
                                  ODCM SOFTWARE VERSION      1.1 January 1995  
                                  ODCM DATABASE VERSION      1.1 January 1995

\*\*\*\*\*  
\* DELIVER TO HEALTH PHYSICS \*  
\*\*\*\*\*

AQUATIC Effluents- 10CFR50 Listing

24-mar-2002 07:41:17

STATION: BYRON STATION  
UNIT: 2  
PERIOD: 01/01/01 12/31/01  
NAME: THOMPSON  
REPORT: ANNUAL  
MODE: ACTUAL



BYRON STATION UNIT TWO

ACTUAL 2001

MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 INFANT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	5.23E-04	3.36E-04	5.55E-04	6.63E-04	2.08E-03
INTERNAL ORGAN	5.23E-04	3.37E-04	5.55E-04	6.64E-04	2.08E-03
	GI_LLI	THYROID	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

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	0.03	0.02	0.04	0.04	3.0	0.07
CRIT. ORGAN (MREM)	5.0	0.01	0.01	0.01	0.01	10.0	0.02
		GI_LLI	THYROID	GI_LLI	GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT TWO

2001 ANNUAL REPORT  
 PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM \*  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 INFANT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	5.23E-04	3.36E-04	5.55E-04	6.63E-04	2.08E-03
INTERNAL ORGAN	5.23E-04	3.37E-04	5.55E-04	6.64E-04	2.08E-03
	GI_LLI	THYROID	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL BODY	4.0 MREM	0.052
INTERNAL ORGAN	4.0 MREM	0.052

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 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT TWO

ACTUAL 2001  
 MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 CHILD RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	6.00E-04	4.02E-04	6.37E-04	7.77E-04	2.42E-03
INTERNAL ORGAN	6.25E-04	5.23E-04	7.13E-04	9.06E-04	2.77E-03
	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

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	0.04	0.03	0.04	0.05	3.0	0.08
CRIT. ORGAN (MREM)	5.0	0.01	0.01	0.01	0.02	10.0	0.03
		GI_LLI	GI_LLI	GI_LLI	GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT TWO

2001 ANNUAL REPORT

PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM \*  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 CHILD RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL	5.26E-04	3.38E-04	5.58E-04	6.67E-04	2.09E-03
BODY					
INTERNAL	5.26E-04	3.40E-04	5.59E-04	6.70E-04	2.10E-03
ORGAN	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL	4.0 MREM	0.052
BODY		
INTERNAL	4.0 MREM	0.052
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 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT TWO

ACTUAL 2001  
 MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 TEENAGER RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL	3.61E-04	2.44E-04	3.83E-04	4.69E-04	1.46E-03
BODY					
INTERNAL	4.36E-04	5.66E-04	5.99E-04	8.10E-04	2.41E-03
ORGAN	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

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	0.02	0.02	0.03	0.03	3.0	0.05
CRIT. ORGAN (MREM)	5.0	0.01	0.01	0.01	0.02	10.0	0.02
		GI_LLI	GI_LLI	GI_LLI	GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT TWO

2001 ANNUAL REPORT  
 PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM \*  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 TEENAGER RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL	2.74E-04	1.76E-04	2.91E-04	3.48E-04	1.09E-03
BODY					
INTERNAL	2.76E-04	1.79E-04	2.93E-04	3.51E-04	1.10E-03
ORGAN	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL	4.0 MREM	0.027
BODY		
INTERNAL	4.0 MREM	0.027
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 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT TWO

ACTUAL 2001  
 MAXIMUM DOSES (MREM) RESULTING FROM AQUATIC EFFLUENTS  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 ADULT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL BODY	5.01E-04	3.34E-04	5.31E-04	6.46E-04	2.01E-03
INTERNAL ORGAN	6.07E-04	7.53E-04	8.38E-04	1.09E-03	3.28E-03
	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

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	0.03	0.02	0.04	0.04	3.0	0.07
CRIT. ORGAN (MREM)	5.0	0.01	0.02	0.02	0.02	10.0	0.03
		GI_LLI	GI_LLI	GI_LLI	GI_LLI		GI_LLI

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT TWO

2001 ANNUAL REPORT  
 PROJECTED DOSE AT NEAREST COMMUNITY WATER SYSTEM \*  
 PERIOD OF RELEASE - 01/01/01 TO 12/31/01 CALCULATED 03/24/02  
 ADULT RECEPTOR

DOSE TYPE	1ST QUARTER JAN-MAR	2ND QUARTER APR-JUN	3RD QUARTER JUL-SEP	4TH QUARTER OCT-DEC	ANNUAL
TOTAL	3.89E-04	2.50E-04	4.13E-04	4.94E-04	1.55E-03
BODY					
INTERNAL	3.91E-04	2.54E-04	4.15E-04	4.98E-04	1.56E-03
ORGAN	GI_LLI	GI_LLI	GI_LLI	GI_LLI	GI_LLI

THIS IS A REPORT FOR THE CALENDAR YEAR 2001

COMPLIANCE STATUS - 40 CFR 141

TYPE	ANNUAL LIMIT	% OF LIMIT
TOTAL	4.0 MREM	0.039
BODY		
INTERNAL	4.0 MREM	0.039
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 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995



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\* DELIVER TO HEALTH PHYSICS \*  
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24-mar-2002 07:31:11

Total Effective Dose Equivalent - 10CFR20 Listing

STATION: BYRON STATION  
UNIT: 2  
PERIOD: 01/01/01 12/31/01  
NAME: THOMPSON  
REPORT: ANNUAL  
MODE: ACTUAL

For ADULT dose calculations, the included pathways are:

INHALATION  
MILK  
PRODUCE  
VEGETABLES  
MEAT  
GROUND DEPOSITION  
FISH  
WATER  
SKYSHINE  
WHOLE BODY

Airborne Effluents are complete from 01/01/01 to 12/31/01  
Aquatic Effluents are complete from 01/01/01 to 12/31/01

BYRON STATION UNIT TWO

10 CFR 20 COMPLIANCE ASSESSMENT

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

CALCULATED 03/24/02

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

Total Effective Dose Equivalent, mrem/yr	3.44E-03
10 CFR 20.1301 (a)(1) limit mrem/yr	100.0
% of limit	0.00

Compliance Summary - 10CFR20

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	% of Limit
TEDE	1.02E-03	7.61E-04	7.28E-04	9.30E-04	0.00

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
ODCM SOFTWARE VERSION 1.1 January 1995  
ODCM DATABASE VERSION 1.1 January 1995

BYRON STATION UNIT TWO

10 CFR 20 COMPLIANCE ASSESSMENT

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

CALCULATED 03/24/02

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

		Dose (mrem)	Limit (mrem)	% of Limit
Whole Body (DDE)	Plume	2.75E-06		
	Skyshine	0.00E+00		
	Ground	7.53E-06		
	Total	1.03E-05	25.0	0.00
Organ Dose (CDE)	Thyroid	3.13E-03	75.0	0.00
	Gonads	3.16E-03	25.0	0.01
	Breast	3.07E-03	25.0	0.01
	Lung	3.07E-03	25.0	0.01
	Marrow	3.46E-03	25.0	0.01
	Bone	7.18E-03	25.0	0.03
	Remainder	3.63E-03	25.0	0.01
	CEDE	3.43E-03		
	TEDE	3.44E-03	100.0	0.00

RESULTS BASED UPON: ODCM ANNEX REVISION 1.3 MARCH 1996  
 ODCM SOFTWARE VERSION 1.1 January 1995  
 ODCM DATABASE VERSION 1.1 January 1995