



Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.

James A. Fitzpatrick NPP
P.O. Box 110
Lycoming, NY 13093
Tel 315-342-3840

Joseph Pechacek
Licensing Manager

April 17, 2009
JAFF-09-0051

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

**Subject: Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
License No. DPR-59**

**2007 Annual Radioactive Effluent Release Report Revision to Tables 1, 1A, 1B
and 2A**

Reference: 1) James a. Fitzpatrick Nuclear Power Plant, Docket No. 50-333, License No. DPR-59, Annual Radioactive Effluent Release Report (JAFF-08-0037), dated April 30, 2008

Enclosure 1 contains corrected Tables 1, 1A, 1B, and 2A, to the 2007 Annual Radioactive Effluent Release Report for the period of January 1, 2007 through December 31, 2007. This report was submitted in accordance with the requirements of the James A. FitzPatrick Nuclear Power Plant Offsite Dose Calculation Manual, Part 1, Radiological Controls, Section 6.2, on April 30, 2008 (Reference 1). Subsequent to that submittal JAF identified that Table 1 Annual Dose Assessment, Table 1A Gaseous Effluents Summation of All Releases, Table 1B Gaseous Effluents – Elevated Release and Table 2A Liquid Effluents – Summation of All Releases each contained typographical errors. Enclosure 1 revises each table correcting the errors.

If you have any questions concerning the enclosure, please contact Crystal A. Boucher, Chemistry Superintendent, at the James A. FitzPatrick Nuclear Power Plant at (315)349-6748.

Sincerely,

Joseph Pechacek
Licensing Manager

Enclosure 1: 2007 Annual Radioactive Effluent Release Report Corrected Tables 1, 1A, 1B, and 2A

JP/ed
cc: next page

JE48
MRR

cc:

Mr. Samuel J. Collins, Regional Administrator
U.S. Nuclear Regulatory Commission, Region I
475 Allendale Road
King of Prussia, PA 19406-1415

Office of NRC Resident Inspector
James A. Fitzpatrick Nuclear Power Plant
P.O. Box 136
Lycoming, New York 13093

Mr. Don Sherman
American Nuclear Insurers
95 Glastonbury Boulevard
Glastonbury, CT 06033-4438

Mr. Bhalchandra Vaidya, Project Manager
Plant Licensing Branch
U.S. Nuclear Regulatory Commission
Mail Stop O-8-G14
Washington, DC 20555

Paul Merges, PhD
Chief, Bureau of Radiation
Division of Hazardous Substance Regulation
New York State
Department of Environmental Conservation
Albany, NY 12233

JAFP-09-0051

Enclosure 1

2007 Annual Radioactive Effluent Release Report

Corrected

Table 1

Table 1A

Table 1B

Table 2A

ENTERGY NUCLEAR OPERATIONS, INC.
 JAMES A. FITZPATRICK NUCLEAR POWER PLANT
 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
 JANUARY 2007-DECEMBER 2007

ADDENDUM 1 (continued)

**TABLE 1
 ANNUAL DOSE ASSESSMENT 2007**

C. IODINES AND PARTICULATES

<u>QUARTER</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>ANNUAL</u>
	(a)	(b)	(b)	(b)	(b)
Organ (mrem)	2.94E-03	1.24E-02	8.96E-03	6.72E-03	3.10E-02
% of Limit	3.92E-02	1.65E-01	1.19E-01	8.96E-02	2.07E-01
	(a)	(a)	(a)	(a)	(a)
Organ Dose Rate (mrem/yr)	3.20E-04	7.91E-04	5.54E-04	4.06E-04	7.91E-04
% of Limit	2.13E-05	5.27E-05	3.70E-05	2.71E-05	5.27E-05

- (a) Dose to the Child Thyroid primarily by the vegetation pathway.
 (b) Dose to the Infant Thyroid primarily by the goats milk pathway.
-

ENTERGY NUCLEAR OPERATIONS, INC.
 JAMES A. FITZPATRICK NUCLEAR POWER PLANT
 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
 JANUARY 2007-DECEMBER 2007

**TABLE 1A
 GASEOUS EFFLUENTS--SUMMATION OF ALL RELEASES**

	<u>UNIT</u>	<u>QTR 1</u>	<u>QTR 2</u>	<u>QTR 3</u>	<u>QTR 4</u>	<u>EST TOTAL ERROR %</u>
A. FISSION AND ACTIVATION GASES						
1. Total Release	Ci	4.62E+01	2.67E+02	1.60E+02	1.50E+02	≤2.50E+01
2. Average release rate for period	μCi/sec	5.87E+00	3.40E+01	2.02E+01	1.89E+01	
3. Applicable ODCM Limit	%	*	*	*	*	
B. IODINE-131						
1. Total Iodine-131	Ci	2.04E-04	1.27E-03	9.26E-04	6.57E-04	≤2.50E+01
2. Average release rate for period	μCi/sec	2.59E-05	1.62E-04	1.17E-04	8.27E-05	
3. Applicable ODCM Limit	%	*	*	*	*	
C. PARTICULATES						
1. Particulates with half-lives >8 days	Ci	1.01E-04	1.30E-04	1.48E-04	7.72E-05	≤3.60E+01
2. Average release rate for period	μCi/sec	1.29E-05	1.65E-05	1.87E-05	9.71E-06	
3. Applicable ODCM Limit	%	*	*	*	*	
4. Gross alpha radioactivity	Ci	3.91E-07	3.83E-07	6.97E-07	3.71E-07	≤2.50E+01
D. TRITIUM						
1. Total Release	Ci	4.17E+00	3.11E+00	3.59E+00	3.09E+00	≤2.50E+01
2. Average release rate for period	μCi/sec	5.30E-01	3.97E-01	4.51E-01	3.89E-01	
3. Applicable ODCM Limit	%	*	*	*	*	
*E. PERCENT OF APPLICABLE ODCM LIMITS						
FISSION AND ACTIVATION GASES						
1. Quarterly gamma air dose limit	%	1.43E-02	1.16E-01	6.70E-02	6.67E-02	
2. Quarterly beta air dose limit	%	9.22E-04	9.76E-03	5.46E-03	4.91E-03	
3. Yearly gamma air dose limit	%	7.16E-03	5.80E-02	3.35E-02	3.34E-02	
4. Yearly beta air dose limit	%	4.61E-04	4.88E-03	2.73E-03	2.46E-03	
5. Whole body dose rate limit	%	1.97E-03	1.26E-01	3.25E-02	1.09E-01	
6. Skin dose rate limit	%	3.99E-04	2.75E-02	7.15E-03	2.18E-02	
HALOGENS, TRITIUM AND PARTICULATES WITH HALF-LIVES >8 DAYS						
7. Quarterly dose limit (organ)	%	3.92E-02	1.65E-01	1.19E-01	8.96E-02	
8. Yearly dose limit (organ)	%	1.96E-02	8.26E-02	5.97E-02	4.48E-02	
9. Organ dose rate limit	%	2.13E-05	5.27E-05	3.70E-05	2.71E-05	

ENTERGY NUCLEAR OPERATIONS, INC.
 JAMES A. FITZPATRICK NUCLEAR POWER PLANT
 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
 JANUARY 2007-DECEMBER 2007

TABLE 1B
GASEOUS EFFLUENTS--ELEVATED RELEASE

<u>NUCLIDES RELEASED</u>	<u>UNIT</u>	<u>CONTINUOUS MODE</u>			
		<u>QUARTER 1</u>	<u>QUARTER 2</u>	<u>QUARTER 3</u>	<u>QUARTER 4</u>
1. <u>Fission Gases</u>					
Argon-41	Ci	3.63E+00	2.76E+00	3.83E+00	5.55E+00
Krypton-85m	Ci	1.37E+01	2.08E+01	2.70E+01	3.38E+01
Krypton-87	Ci	1.10E-01	3.68E+01	1.82E+01	4.86E+00
Krypton-88	Ci	8.52E+00	3.71E+01	3.53E+01	4.20E+01
Xenon-133	Ci	1.82E+01	2.19E+01	2.68E+01	3.31E+01
Xenon-135	Ci	7.43E-01	7.22E+01	2.87E+01	5.21E+00
Xenon-135m	Ci	1.96E-01	1.88E+01	4.00E+00	3.44E+00
Xenon-137	Ci	-----	-----	4.85E+00	1.07E+01
Xenon-138	Ci	7.28E-01	5.71E+01	1.18E+01	1.08E+01
TOTAL	Ci	4.58E+01	2.67E+02	1.60E+02	1.49E+02
2. <u>Iodines</u>					
Iodine-131	Ci	7.51E-06	1.15E-03	8.31E-04	5.19E-04
Iodine-133	Ci	2.75E-05	1.72E-03	1.05E-03	5.42E-04
Iodine-135	Ci	-----	8.89E-04	1.11E-04	1.49E-04
TOTAL	Ci	3.50E-05	3.76E-03	1.99E-03	1.21E-03
3. <u>Particulates</u>					
Manganese-54	Ci	-----	2.24E-06	8.81E-07	4.37E-07
Cobalt-60	Ci	-----	-----	4.50E-07	-----
Strontium-89	Ci	4.74E-05	2.43E-05	1.93E-05	2.01E-05
Strontium-90	Ci	2.75E-07	1.69E-07	6.35E-08	1.87E-07
Cadmium-115m	Ci	-----	-----	3.90E-05	-----
Cesium-137	Ci	-----	3.58E-07	-----	-----
Barium-140	Ci	-----	-----	3.76E-06	1.82E-05
TOTAL	Ci	4.77E-05	2.71E-05	6.34E-05	3.89E-05
4. <u>Tritium</u>					
Hydrogen-3	Ci	4.26E-01	3.63E-01	6.05E-01	5.31E-01

Note: There were no batch releases for this report period.

ENTERGY NUCLEAR OPERATIONS, INC.
 JAMES A. FITZPATRICK NUCLEAR POWER PLANT
 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
 JANUARY, 2007-DECEMBER 2007

TABLE 2A
LIQUID EFFLUENTS--SUMMATION OF ALL RELEASES

	<u>UNIT</u>	<u>QTR 1</u>	<u>QTR 2</u>	<u>QTR 3</u>	<u>QTR 4</u>	<u>EST TOTAL ERROR %</u>
A. FISSION AND ACTIVATION PRODUCTS						
1. Total Release (not including tritium, gases and alpha)	Ci	NONE	NONE	NONE	1.72E-05	≤2.50E+01
2. Average diluted concentration during period	μCi/ml	NONE	NONE	NONE	1.72E-11	
3. Applicable ODCM Limit	%	-----	-----	-----	*	
B. TRITIUM						
1. Total Release	Ci	4.39E-05	2.00E-04	8.87E-05	1.26E-01	≤2.50E+01
2. Average diluted concentration during period (Note 1)	μCi/ml	6.65E-07	1.58E-06	1.05E-06	7.37E-07	
3. Applicable ODCM Limit	%	*	*	*	*	
C. DISSOLVED AND ENTRAINED GASES						
1. Total Release	Ci	NONE	NONE	NONE	5.36E-04	≤2.50E+01
2. Average diluted concentration during period	μCi/ml	NONE	NONE	NONE	3.90E-10	
3. Applicable ODCM Limit	%	*	*	*	*	
D. GROSS ALPHA RADIOACTIVITY						
1. Total Release	Ci	NONE	NONE	NONE	2.14E-06	≤4.20E+01
E. VOLUME OF WASTE RELEASED (PRIOR TO DILUTION)						
	liters	2.22E+04	3.67E+04	4.42E+04	3.33E+05	
F. VOLUME OF DILUTION WATER USED DURING PERIOD						
	liters	1.35E+08	3.37E+08	1.97E+08	1.01E+09	
*G. PERCENT OF APPLICABLE ODCM LIMITS						
1. Quarterly Whole Body Dose	%	3.05E-04	6.50E-04	1.58E-04	1.97E-04	
2. Quarterly Organ Dose	%	9.16E-05	1.95E-04	4.75E-05	5.78E-05	
3. Annual Whole Body Dose	%	1.53E-04	3.25E-04	7.92E-05	9.85E-05	
4. Annual Organ Dose	%	4.58E-05	9.75E-05	2.38E-05	2.89E-05	

(Note 1) Concentration includes summation from diluted and undiluted values from Canal and Non-Canal releases (Table 2B).