

**TABLES**  
**2004 Gaseous Effluent Releases of Tritium**  
**From Nuclear Reactors Operating in the United States**

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**2004 Gaseous Tritium Releases from Pressurized Water Reactors (PWRs), in curies**

2004 Quarter	Arkansas 1	Arkansas 2	Beaver Valley 1	Braidwood 1	Braidwood 2	Byron 1
1st	8.98E+00	5.77E+00	2.07E+01	1.53E+01	8.03E+00	3.18E-01
2nd	1.82E+01	1.09E+01	2.18E+01	1.63E+01	1.60E+01	2.19E-01
3rd	1.14E+01	9.51E+00	1.88E+01	2.41E-01	4.27E+00	3.06E-01
4th	9.78E+00	6.09E+00	1.55E+01	2.88E-01	1.07E+00	3.61E-01
<b>Total</b>	<b>48</b>	<b>32</b>	<b>77</b>	<b>32</b>	<b>29</b>	<b>1</b>
	Byron 2	Callaway 1	Calvert Cliffs 1	Catabwa 1	Comanche Peak 1	Cook 1
1st	5.31E-01	6.09E+00	8.84E-01	4.84E+01	5.12E+00	3.69E+01
2nd	1.67E-01	1.31E+01	1.85E+00	3.85E+01	1.15E+01	2.35E+01
3rd	2.49E-01	1.06E+01	2.13E+00	4.62E+01	1.41E+01	2.03E+01
4th	5.63E-01	8.12E+00	1.00E+00	3.95E+01	9.73E+00	7.74E+01
<b>Total</b>	<b>2</b>	<b>38</b>	<b>6</b>	<b>173</b>	<b>40</b>	<b>158</b>
	Crystal River 3	Davis-Besse 1	Diablo Canyon 1	Farley 1	Farley 2	Fort Calhoun 1
1st	9.34E-01	1.19E+01	8.99E+01	3.65E+00	3.99E+00	1.53E+00
2nd	1.59E+00	8.59E+00	6.35E+01	3.52E+00	4.40E+00	4.36E-01
3rd	1.60E+00	6.95E+00	4.07E+01	2.87E+00	4.45E+00	6.19E-01
4th	1.54E+00	8.25E+00	1.09E+02	3.65E+00	4.71E+00	5.51E-01
<b>Total</b>	<b>6</b>	<b>36</b>	<b>303</b>	<b>14</b>	<b>18</b>	<b>3</b>
	Ginna 1	Harris 1	Indian Point 1	Indian Point 3	Kewaunee 1	McGuire 1
1st	1.86E+01	4.89E+01	6.89E-01	1.42E+00	2.38E+00	5.63E+01
2nd	1.80E+01	4.82E+01	3.06E-01	1.34E+00	7.13E-01	4.98E+01
3rd	1.31E+01	3.82E+01	2.11E-01	1.14E+00	1.11E+00	4.15E+01
4th	7.92E+00	4.10E+01	1.59E+00	1.57E+00	1.72E+01	4.65E+01
<b>Total</b>	<b>58</b>	<b>176</b>	<b>3</b>	<b>5</b>	<b>21</b>	<b>194</b>
	Millstone 2	Millstone 3	North Anna 1	Oconee 1	Palisades 1	Palo Verde 1
1st	2.15E+00	6.07E+00	4.46E+00	1.98E+01	2.34E+01	4.45E+02
2nd	1.20E+00	2.58E+01	2.29E+01	1.50E+01	1.17E+01	1.07E+02
3rd	1.19E+00	2.61E+01	NR*	2.46E+01	2.38E+01	1.06E+02
4th	1.11E+00	2.03E+01	NR*	2.04E+01	4.03E+01	1.40E+01
<b>Total</b>	<b>6</b>	<b>78</b>	<b>27</b>	<b>80</b>	<b>99</b>	<b>672</b>
	Palo Verde 2	Palo Verde 3	Point Beach 1	Prairie Island 1	Robinson 2	Salem 1
1st	1.46E+02	1.51E+02	1.22E+01	3.10E+00	1.37E+00	2.73E+01
2nd	9.45E+01	3.59E+02	1.57E+01	3.24E+00	2.07E+00	6.72E+01

3rd	1.83E+02	2.54E+02	1.17E+01	5.27E+00	1.26E+00	2.83E+01
4th	5.57E+01	2.08E+02	2.10E+01	5.17E+00	1.23E+00	1.82E+01
<b>Total</b>	<b>479</b>	<b>972</b>	<b>61</b>	<b>17</b>	<b>6</b>	<b>141</b>
	<b>Salem 2</b>	<b>San Onofre 1</b>	<b>San Onofre 2</b>	<b>Seabrook 1</b>	<b>Sequoyah</b>	<b>South Texas 1</b>
1st	1.77E+01	ND**	1.62E+01	1.53E+01	5.74E+00	4.67E+01
2nd	3.95E+01	2.27E-01	1.36E+01	2.03E+01	1.95E+01	2.27E+01
3rd	3.44E+01	ND**	1.36E+01	1.94E+01	1.20E+01	2.78E+01
4th	4.19E+01	ND**	1.78E+01	2.38E+01	7.04E+01	1.58E+01
<b>Total</b>	<b>134</b>	<b>0</b>	<b>61</b>	<b>79</b>	<b>108</b>	<b>113</b>
	<b>South Texas 2</b>	<b>St. Lucie 1</b>	<b>St. Lucie 2</b>	<b>Summer 1</b>	<b>Surry 1</b>	<b>Three Mile Island 1</b>
1st	2.39E+01	5.10E+00	6.66E-01	8.21E-02	5.87E+00	2.48E+01
2nd	3.39E+01	2.67E+00	1.24E-01	1.17E+00	6.81E+00	1.87E+01
3rd	2.63E+01	2.19E+00	3.22E-01	0.00E+00	1.03E+01	1.23E+02
4th	8.55E+01	3.33E+00	6.45E-02	2.45E-03	8.66E+00	1.41E-01
<b>Total</b>	<b>170</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>32</b>	<b>167</b>
	<b>Turkey Point 3</b>	<b>Turkey Point 4</b>	<b>Vogle 1</b>	<b>Vogle 2</b>	<b>Waterford 3</b>	<b>Watts Bar 1</b>
1st	ND**	ND**	3.21E+01	2.53E-03	1.70E+01	3.80E+00
2nd	ND**	ND**	6.09E+00	8.33E-01	1.18E+01	2.36E+00
3rd	1.35E-03	ND**	1.40E+00	3.22E-03	1.14E+01	4.08E+00
4th	7.36E-03	ND**	2.12E+01	3.40E+00	1.04E+01	3.66E+00
<b>Total</b>	<b>0</b>		<b>61</b>	<b>4</b>	<b>51</b>	<b>14</b>
	<b>Wolf Creek</b>					
1st	4.63E+00					
2nd	1.02E-01					
3rd	1.51E+01					
4th	4.52E+00					
<b>Total</b>	<b>24</b>					

**Source:** U.S. Nuclear Regulatory Commission. *Effluent Database for Nuclear Power Plants*. Washington, DC: NRC, at [http://www.reirs.com/effluent/EDB\\_rptLicenseeReleaseSummary.asp](http://www.reirs.com/effluent/EDB_rptLicenseeReleaseSummary.asp), part of the Radiation Exposure Information and Reporting System (REIRS) for Radiation Workers.

**Notes:**

Translation of some of the numeric values, as examples: 6.32E-02 = 0.0632; 4.94E+01 = 49.4; 1.22E+00 = 1.22

\*NR = Not reported by the plant operator

\*\* ND = Not detected by the plant operator

Back to related information at [http://www.ieer.org/sdfiles/16-1/tritium\\_releases.html](http://www.ieer.org/sdfiles/16-1/tritium_releases.html).

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## 2004 Gaseous Tritium Releases from Boiling Water Reactors (BWRs), in curies

2004 Quarter	Big Rock Point 1	Browns Ferry 1	Brunswick 1	Clinton 1	Columbia Generating	Cooper Station 1
1st	6.32E-02	2.36E+01	4.29E+01	1.04E+01	2.09E+01	9.32E+00
2nd	6.38E-02	1.03E+01	2.79E+01	7.50E+00	3.28E+01	6.80E+00
3rd	6.46E-02	1.20E+01	4.51E+01	4.78E+00	2.76E+01	1.10E+01
4th	6.46E-02	8.61E+00	4.54E+01	9.46E+00	3.15E+01	6.97E+00
<b>Total</b>	<b>0.26</b>	<b>54.51</b>	<b>161.30</b>	<b>32.14</b>	<b>112.8</b>	<b>34.09</b>

  

	Dresden 1	Fermi 2	Fitzpatrick 1	Grand Gulf 1	Hatch 1	Hatch 2
1st	5.62E+00	1.99E+01	3.54E+00	8.79E+00	3.91E+00	7.34E+00
2nd	7.07E+00	3.30E+01	3.71E+00	8.95E+00	3.98E+00	4.52E+00
3rd	6.65E+00	3.40E+01	6.27E+00	7.65E+00	4.86E+00	7.39E+00
4th	4.10E+00	1.46E+01	3.57E+00	6.41E+00	4.14E+00	4.95E+00
<b>Total</b>	<b>23.44</b>	<b>101.50</b>	<b>17.09</b>	<b>31.80</b>	<b>16.89</b>	<b>24.20</b>

  

	Hope Creek 1	LaSalle 1	Limerick 1	Millstone 1	Monticello 1	Nine Mile Point 1
1st	6.62E-08	8.15E+00	7.59E-01	5.07E-01	4.75E+00	1.33E+01
2nd	0	3.28E+01	5.44E-01	1.97E-01	3.65E+00	8.12E+00
3rd	8.25E-05	1.29E+01	5.37E-01	2.84E-01	4.16E+00	1.13E+01
4th	3.59E-03	2.43E+01	5.47E-01	1.88E-01	3.63E+00	1.41E+01
<b>Total</b>	<b>0.00</b>	<b>78.15</b>	<b>2.39</b>	<b>1.18</b>	<b>16.19</b>	<b>46.82</b>

  

	Nine Mile Point 2	Oyster Creek 1	Peach Bottom 2	Perry 1	Pilgrim 1	Quad Cities 1
1st	2.81E+01	4.98E+00	ND	7.59E-01	8.41E+01	4.94E+01
2nd	9.44E+00	9.93E+00	ND	5.44E-01	5.72E+01	4.32E+01
3rd	1.59E+01	2.44E+01	ND	5.37E-01	6.30E+01	5.00E+01
4th	1.70E+01	2.34E+01	ND	5.47E-01	7.69E+01	6.23E+01
<b>Total</b>	<b>70.44</b>	<b>62.71</b>		<b>2.39</b>	<b>281.20</b>	<b>204.90</b>

  

	River Bend 1	Susquehanna 1	Vermont Yankee 1
1st	9.95E+00	4.59E+01	1.22E+00
2nd	1.98E+01	2.53E+01	2.88E+00
3rd	1.03E-01	3.29E+01	2.55E+00
4th	6.55 E+00	5.59E+01	1.81E+00
<b>Total</b>	<b>36.40</b>	<b>160.00</b>	<b>8.46</b>

**Source:** U.S. Nuclear Regulatory Commission. *Effluent Database for Nuclear Power Plants*. Washington, DC: NRC, at [http://www.reirs.com/effluent/EDB\\_rptLicenseeReleaseSummary.asp](http://www.reirs.com/effluent/EDB_rptLicenseeReleaseSummary.asp), part of the Radiation Exposure Information and Reporting System (REIRS) for Radiation Workers

**Notes:**

1. Translation of some the numeric values, as examples: 6.32E-02 = 0.0632; 4.94E+01 = 49.4; 1.22E+00 = 1.22
2. Fitzpatrick data are labeled: "Total iodine-131." It appears under the tritium section and the numbers for I-131 in the iodine section differ.
3. ND = Not detected by the plant operator

Back to related information at [http://www.ieer.org/sdfiles/16-1/tritium\\_releases.html](http://www.ieer.org/sdfiles/16-1/tritium_releases.html).

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## Summary of 2004 Gaseous Tritium Releases From Operating Reactors in U.S., in curies

Boiling Water Reactors	Curies
Big Rock 1	0
Browns Ferry 1	55
Brunswick 1	161
Clinton 1	32
Columbia Generating	113
Cooper Station 1	34
Dresden 1	24
Fermi 2	102
Fitzpatrick 1	17
Grand Gulf 1	32
Hatch 1	17
Hatch 2	24
Hope Creek 1	0
LaSalle 1	78
Limerick 1	2
Millstone 1	1
Monticello 1	16
Nine Mile Point 1	47
Nine Mile Point 2	70
Oyster Creek 1	63
Peach Bottom 2	ND
Perry 1	56
Pilgrim 1	281
Quad Cities 1	205
River Bend 1	36
Susquehanna 1	160
Vermont Yankee 1	8
Pressurized Water Reactors	
Arkansas 1	48
Arkansas 2	32
Beaver Valley 1	77
Braidwood 1	32
Braidwood 2	29
Byron 1	1
Byron 2	1
Callaway 1	38
Calvert Cliffs 1	6
Catabwa 1	173
Comanche Peak 1	40
Cook 1	158

Pressurized Water Reactors	Curies
(continued)	
Crystal River 3	6
Davis-Besse 1	36
Diablo Canyon 1	303
Farley 1	14
Farley 2	18
Fort Calhoun 1	3
Ginna 1	58
Harris 1	176
Indian Point 1	3
Indian Point 3	5
Kewaunee 1	21
McGuire 1	194
Millstone 2	6
Millstone 3	78
North Anna 1	27
Oconee 1	80
Palisades 1	99
Palo Verde 1	672
Palo Verde 2	479
Palo Verde 3	972
Point Beach 1	61
Prairie Island 1	17
Robinson 2	6
Salem 1	141
Salem 2	134
San Onofre 1	0
San Onofre 2	61
Seabrook 1	79
Sequoyah	108
South Texas 1	113
South Texas 2	170
St. Lucie 1	13
St. Lucie 2	1
Summer 1	1
Surry 1	32
Three Mile Island 1	167
Turkey Point 3	0
Turkey Point 4	ND
Vogtle 1	61
Vogtle 2	4
Waterford 3	51
Watts Bar 1	14
Wolf Creek	24

Source: U.S. Nuclear Regulatory Commission. *Effluent Database for Nuclear Power Plants*. Washington, DC: NRC, at [http://www.reirs.com/effluent/EDB\\_rptLicenseeReleaseSummary.asp](http://www.reirs.com/effluent/EDB_rptLicenseeReleaseSummary.asp), part of the Radiation Exposure Information and Reporting System (REIRS) for Radiation Workers. Viewed May 2009.

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