

**Errata page for U.S. Department of Energy  
Portsmouth Gaseous Diffusion Plant  
Annual Site Environmental Data – 2010  
(DOE/PPPO/03-0244&D1,  
FBP-ER-PRO-WD-RPT-0002, Revision 3)**

During an evaluation of radiological dose, it was discovered that an error was made in the calculation of dose at the ambient air monitoring stations involving the misapplication of the conversion factor converting concentration to dose. The following corrections to the report referenced above have been made to respond to this error.

<b><u>Page</u></b>	<b><u>Correction</u></b>
3-2	Table 3.3. Dose calculations for ambient air monitoring stations – 2010. A replacement for Table 3.3 (pages 3-2 through 3-5) is provided following this Errata page.

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**Table 3.2. Predicted radiation doses from airborne releases at PORTS – 2010**

Effective dose to:	DOE releases	All PORTS releases (DOE and USEC <sup>a</sup> )
Maximally exposed individual (mrem/year)	0.12	0.17
Population <sup>b</sup> (person-rem/year)	0.59	1.4

<sup>a</sup>USEC is defined as both USEC Government Services and USEC, Inc..

<sup>b</sup>Population within 50 miles (80 km) of plant site.

**Table 3.3. Dose calculations for ambient air monitoring stations – 2010**

Station	Parameter <sup>a</sup>	Dose <sup>b</sup> (mrem/year)	Total dose for station <sup>c</sup>	Net dose for station <sup>d</sup>
A3	Americium-241	8.8E-03		
	Neptunium-237	4.8E-03		
	Plutonium-238	4.2E-03		
	Plutonium-239/240	4.8E-03		
	<b>Technetium-99</b>	2.0E-01		
	<b>Uranium-233/234</b>	1.1E-01		
	<b>Uranium-235</b>	5.1E-03		
	Uranium-236	5.1E-04	(0.38)	(0.27)
	<b>Uranium-238</b>	4.0E-02	3.8E-01	2.7E-01
A6	Americium-241	6.4E-03		
	Neptunium-237	2.5E-03		
	Plutonium-238	7.6E-03		
	Plutonium-239/240	8.9E-03		
	<b>Technetium-99</b>	4.1E-02		
	<b>Uranium-233/234</b>	5.9E-02		
	<b>Uranium-235</b>	3.6E-03		
	Uranium-236	3.6E-04	(0.16)	(0.05)
	<b>Uranium-238</b>	3.3E-02	1.6E-01	5.0E-02
A8	Americium-241	8.0E-03		
	Neptunium-237	4.6E-06		
	Plutonium-238	8.3E-03		
	Plutonium-239/240	4.5E-03		
	<b>Technetium-99</b>	2.4E-01		
	<b>Uranium-233/234</b>	7.6E-02		
	<b>Uranium-235</b>	3.4E-03		
	Uranium-236	5.3E-04	(0.38)	(0.27)
	<b>Uranium-238</b>	3.1E-02	3.8E-01	2.7E-01

**Table 3.3. Dose calculations for ambient air monitoring stations – 2010 (continued)**

Station	Parameter <sup>a</sup>	Dose <sup>b</sup> (mrem/year)	Total dose for station <sup>c</sup>	Net dose for station <sup>d</sup>
A9	Americium-241	4.4E-03		
	Neptunium-237	4.7E-03		
	Plutonium-238	7.5E-03		
	Plutonium-239/240	9.3E-03		
	<b>Technetium-99</b>	3.8E-02		
	<b>Uranium-233/234</b>	8.6E-02		
	<b>Uranium-235</b>	5.1E-03		
	Uranium-236	9.4E-04	(0.19)	(0.08)
A10	<b>Uranium-238</b>	3.5E-02	1.9E-01	8.0E-02
	Americium-241	8.2E-03		
	Neptunium-237	2.1E-03		
	Plutonium-238	8.1E-03		
	Plutonium-239/240	9.1E-03		
	<b>Technetium-99</b>	1.4E-01		
	<b>Uranium-233/234</b>	9.4E-02		
	<b>Uranium-235</b>	4.5E-03		
A12	Uranium-236	5.6E-04	(0.29)	(0.18)
	<b>Uranium-238</b>	3.0E-02	2.9E-01	1.8E-01
	Americium-241	3.6E-03		
	Neptunium-237	2.1E-03		
	Plutonium-238	8.1E-03		
	Plutonium-239/240	6.9E-03		
	<b>Technetium-99</b>	2.5E-01		
	<b>Uranium-233/234</b>	1.2E-01		
A15	<b>Uranium-235</b>	4.1E-03		
	Uranium-236	9.5E-04	(0.44)	(0.33)
	<b>Uranium-238</b>	3.9E-02	4.4E-01	3.3E-01
	Americium-241	7.8E-03		
	Neptunium-237	3.1E-03		
	Plutonium-238	6.3E-03		
	Plutonium-239/240	2.5E-03		
	<b>Technetium-99</b>	1.4E-01		
A23	<b>Uranium-233/234</b>	9.7E-02		
	<b>Uranium-235</b>	4.1E-03		
	Uranium-236	3.8E-04	(0.30)	(0.19)
	<b>Uranium-238</b>	4.0E-02	3.0E-01	1.9E-01
	Americium-241	8.2E-03		
	Neptunium-237	9.7E-04		
	Plutonium-238	7.6E-03		
	Plutonium-239/240	2.1E-03		
A23	<b>Technetium-99</b>	1.1E+00		
	<b>Uranium-233/234</b>	1.7E-01		
	<b>Uranium-235</b>	5.6E-03		
	Uranium-236	5.8E-04	(1.4)	(1.3)
	<b>Uranium-238</b>	4.5E-02	1.4E+00	1.3E+00

**Table 3.3. Dose calculations for ambient air monitoring stations – 2010 (continued)**

Station	Parameter <sup>a</sup>	Dose <sup>b</sup> (mrem/year)	Total dose for station <sup>c</sup>	Net dose for station <sup>d</sup>
A24	Americium-241	5.9E-03		
	Neptunium-237	3.3E-03		
	Plutonium-238	1.5E-02		
	Plutonium-239/240	2.3E-03		
	<b>Technetium-99</b>	7.1E-01		
	<b>Uranium-233/234</b>	9.6E-02		
	<b>Uranium-235</b>	4.5E-03		
	<b>Uranium-236</b>	1.7E-03	(0.87)	(0.76)
A28	<b>Uranium-238</b>	3.8E-02	8.7E-01	7.6E-01
	Americium-241	4.2E-03		
	Neptunium-237	1.1E-03		
	Plutonium-238	4.1E-03		
	Plutonium-239/240	1.3E-02		
	Technetium-99	8.9E-03		
	<b>Uranium-233/234</b>	5.1E-02		
	<b>Uranium-235</b>	2.3E-03		
A29	Uranium-236	3.5E-04	(0.12)	(0.01)
	<b>Uranium-238</b>	3.1E-02	1.2E-01	1.0E-02
	Americium-241	8.4E-03		
	Neptunium-237	4.7E-03		
	Plutonium-238	4.3E-03		
	Plutonium-239/240	9.3E-03		
	<b>Technetium-99</b>	1.2E-01		
	<b>Uranium-233/234</b>	7.1E-02		
A36	<b>Uranium-235</b>	3.1E-03		
	Uranium-236	4.1E-04	(0.25)	(0.14)
	<b>Uranium-238</b>	3.2E-02	2.5E-01	1.4E-01
	Americium-241	7.9E-03		
	Neptunium-237	2.1E-03		
	Plutonium-238	1.0E-02		
	Plutonium-239/240	6.8E-03		
	<b>Technetium-99</b>	3.6E-01		
A37	<b>Uranium-233/234</b>	1.5E-01		
	<b>Uranium-235</b>	5.0E-03		
	Uranium-236	5.7E-04	(0.58)	(0.47)
	<b>Uranium-238</b>	3.7E-02	5.8E-01	4.7E-01
	Americium-241	7.1E-03		
	Neptunium-237	2.1E-03		
	Plutonium-238	9.2E-03		
	Plutonium-239/240	4.8E-03		
A37	Technetium-99	6.5E-03		
	<b>Uranium-233/234</b>	4.6E-02		
	<b>Uranium-235</b>	2.7E-03		
	Uranium-236	3.7E-04	(0.11)	
	<b>Uranium-238</b>	2.8E-02	1.1E-01	-

**Table 3.3. Dose calculations for ambient air monitoring stations – 2010 (continued)**

Station	Parameter <sup>a</sup>	Dose <sup>b</sup> (mrem/year)	Total dose for station <sup>c</sup>	Net dose for station <sup>d</sup>
A41	Americium-241	3.9E-03		
	Neptunium-237	1.0E-03		
	Plutonium-238	4.6E-03		
	Plutonium-239/240	6.5E-03		
	<b>Technetium-99</b>	6.6E-02		
	<b>Uranium-233/234</b>	6.9E-02		
	<b>Uranium-235</b>	5.0E-03		
	Uranium-236	3.8E-04	(0.19)	(0.08)
	<b>Uranium-238</b>	3.7E-02	1.9E-01	8.0E-02
T7	Americium-241	6.3E-03		
	Neptunium-237	3.4E-03		
	Plutonium-238	7.5E-03		
	Plutonium-239/240	7.5E-03		
	<b>Technetium-99</b>	3.4E-01		
	<b>Uranium-233/234</b>	6.6E-02		
	<b>Uranium-235</b>	2.9E-03		
	Uranium-236	6.6E-04	(0.50)	(0.39)
		<b>Uranium-238</b>	6.4E-02	5.0E-01

<sup>a</sup>Parameters listed in **bold** type were detected at least once in the samples collected in 2010 (see Table 2.8).

<sup>b</sup>The dose calculation is based on the maximum detection of each parameter at each station. For parameters that were not detected, half of the highest undetected result for the parameter was used to calculate the activity of each parameter in ambient air that is the basis for the dose. Measurements are provided in scientific notation. The number and sign (+ or -) to the right of the "E" indicate the number of places to the right or left of the decimal point. For example, 3.4E-04 is 0.00034 (the decimal point moves four places to the left); 2.1E+02 is 210 (the decimal point moves two places to the right).

<sup>c</sup>The total dose is provided in scientific notation and standard numeric format (in parentheses).

<sup>d</sup>The net dose is calculated by subtracting the total dose at Station A37 (background) from the total dose calculated for each station (the net dose is recorded as zero for stations with a gross dose less than the background station). The net dose is provided in scientific notation and standard numeric format (in parentheses).