Table D.30. ELCR for the Current Industrial Worker

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	1	1	Surface	Beryllium	3.89E+00			2.06E-10		2.06E-10	0%
5	1	1	Surface	Cadmium	1.10E+00			4.37E-11		4.37E-11	0%
5	1	1	Surface	Cesium-137	5.91E-01	4.48E-10		7.94E-14	3.84E-07	3.84E-07	46%
5	1	1	Surface	Chromium	1.28E+01			2.38E-08		2.38E-08	3%
5	1	1	Surface	Neptunium-237	4.02E-01	1.14E-09		8.03E-11	8.18E-08	8.30E-08	10%
5	1	1	Surface	PCB, Total	1.76E-01	3.44E-09	4.53E-08	3.75E-09		5.25E-08	6%
5	1	1	Surface	Plutonium-239/240	6.14E+00	2.97E-08		2.31E-09	3.14E-10	3.23E-08	4%
5	1	1	Surface	Thorium-230	4.40E+01	1.56E-07		1.42E-08	9.22E-09	1.79E-07	21%
5	1	1	Surface	Uranium-235	1.06E-01	3.02E-10		1.21E-11	1.47E-08	1.50E-08	2%
5	1	1	Surface	Uranium-238	1.97E+00	7.25E-09		2.08E-10	5.75E-08	6.50E-08	8%
5	**1**	**1**	**Surface**	**Totals**		**1.98E-07**	**4.53E-08**	**4.46E-08**	**5.47E-07**	**8.35E-07**	
5	**1**	**1**	**Surface**	**Percent**		**24%**	**5%**	**5%**	**66%**		
5	1	2	Surface	Beryllium	8.23E+00			4.36E-10		4.36E-10	0%
5	1	2	Surface	Cadmium	6.46E+00			2.57E-10		2.57E-10	0%
5	1	2	Surface	Chromium	2.01E+02			3.73E-07		3.73E-07	4%
5	1	2	Surface	Copper	1.81E+02					0.00E+00	0%
5	1	2	Surface	Mercury	5.94E+00					0.00E+00	0%
5	1	2	Surface	Nickel	5.75E+01			3.30E-10		3.30E-10	0%
5	1	2	Surface	PCB, Total	3.21E+01	6.28E-07	8.27E-06	6.83E-07		9.58E-06	96%
5	1	2	Surface	Silver	3.31E+01					0.00E+00	0%
5	1	2	Surface	Thallium	3.70E-01					0.00E+00	0%
5	1	2	Surface	Vanadium	3.49E+01					0.00E+00	0%
5	**1**	**2**	**Surface**	**Totals**		**6.28E-07**	**8.27E-06**	**1.06E-06**		**9.96E-06**	
5	**1**	**2**	**Surface**	**Percent**		**6%**	**83%**	**11%**			
5	1	3	Surface	Chromium	1.45E+01			2.69E-08		2.69E-08	18%
5	1	3	Surface	PCB, Total	2.17E-01	4.25E-09	5.59E-08	4.62E-09		6.48E-08	44%
5	1	3	Surface	Uranium-238	1.73E+00	6.36E-09		1.83E-10	5.04E-08	5.70E-08	38%
5	**1**	**3**	**Surface**	**Totals**		**1.06E-08**	**5.59E-08**	**3.17E-08**	**5.04E-08**	**1.49E-07**	
5	**1**	**3**	**Surface**	**Percent**		**7%**	**38%**	**21%**	**34%**		
5	1	4	Surface	Beryllium	7.25E-01			3.84E-11		3.84E-11	0%
5	1	4	Surface	Chromium	9.30E+01			1.73E-07		1.73E-07	57%
5	1	4	Surface	Cobalt-60	2.20E-02	1.55E-11		8.89E-15	6.98E-08	6.98E-08	23%
5	1	4	Surface	Nickel	4.69E+01			2.69E-10		2.69E-10	0%
5	1	4	Surface	PCB, Total	1.30E-01	2.54E-09	3.35E-08	2.77E-09		3.88E-08	13%
5	1	4	Surface	Thorium-230	5.03E+00	1.78E-08		1.62E-09	1.05E-09	2.05E-08	7%
5	**1**	**4**	**Surface**	**Totals**		**2.03E-08**	**3.35E-08**	**1.77E-07**	**7.08E-08**	**3.02E-07**	
5	**1**	**4**	**Surface**	**Percent**		**7%**	**11%**	**59%**	**23%**		
5	1	5	Surface	Beryllium	8.30E+00			4.40E-10		4.40E-10	0%
5	1	5	Surface	Cadmium	1.20E+00			4.77E-11		4.77E-11	0%
5	1	5	Surface	Nickel	4.07E+01			2.34E-10		2.34E-10	0%
5	1	5	Surface	PCB, Total	2.70E-01	5.28E-09	6.95E-08	5.75E-09		8.06E-08	46%
5	1	5	Surface	Total PAH	9.83E-02	7.02E-09	8.58E-08	1.42E-10		9.30E-08	53%
5	**1**	**5**	**Surface**	**Totals**		**1.23E-08**	**1.55E-07**	**6.61E-09**		**1.74E-07**	
5	**1**	**5**	**Surface**	**Percent**		**7%**	**89%**	**4%**			
5	99	1	Surface	Chromium	5.51E+01			1.02E-07		1.02E-07	60%
5	99	1	Surface	Cobalt-60	1.19E-02	8.39E-12		4.81E-15	3.77E-08	3.77E-08	22%
5	99	1	Surface	Mercury	9.53E+00					0.00E+00	0%
5	99	1	Surface	Nickel	7.02E+01			4.03E-10		4.03E-10	0%
5	99	1	Surface	Silver	1.03E+01					0.00E+00	0%
5	99	1	Surface	Uranium-238	9.45E-01	3.47E-09		9.98E-11	2.75E-08	3.11E-08	18%
5	**99**	**1**	**Surface**	**Totals**		**3.48E-09**		**1.03E-07**	**6.53E-08**	**1.72E-07**	
5	**99**	**1**	**Surface**	**Percent**		**2%**		**60%**	**38%**		
5	194	1	Surface	Antimony	1.50E+00					0.00E+00	0%
5	194	1	Surface	Chromium	3.87E+01			7.18E-08		7.18E-08	100%
5	194	1	Surface	Mercury	6.71E+00					0.00E+00	0%
5	194	1	Surface	Nickel	5.84E+01			3.36E-10		3.36E-10	0%
5	194	1	Surface	Silver	1.09E+01					0.00E+00	0%
5	**194**	**1**	**Surface**	**Totals**				**7.22E-08**		**7.22E-08**	
5	**194**	**1**	**Surface**	**Percent**				**100%**			

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	2	Surface	Chromium	5.96E+01			1.11E-07		1.11E-07	70%
5	194	2	Surface	Silver	1.31E+01					0.00E+00	0%
5	194	2	Surface	Uranium	2.28E+01					0.00E+00	0%
5	194	2	Surface	Uranium-238	1.42E+00	5.22E-09		1.50E-10	4.14E-08	4.68E-08	30%
5	**194**	**2**	**Surface**	**Totals**		**5.22E-09**		**1.11E-07**	**4.14E-08**	**1.57E-07**	
5	**194**	**2**	**Surface**	**Percent**		**3%**		**70%**	**26%**		
5	194	3	Surface	Antimony	6.90E-01					0.00E+00	0%
5	194	3	Surface	Arsenic	1.46E+01	2.15E-07	6.06E-07	1.40E-09		8.22E-07	84%
5	194	3	Surface	Chromium	3.90E+01			7.23E-08		7.23E-08	7%
5	194	3	Surface	Nickel	6.40E+01			3.68E-10		3.68E-10	0%
5	194	3	Surface	Total PAH	3.93E-02	2.81E-09	3.43E-08	5.69E-11		3.72E-08	4%
5	194	3	Surface	Uranium-238	1.28E+00	4.72E-09		1.36E-10	3.74E-08	4.23E-08	4%
5	**194**	**3**	**Surface**	**Totals**		**2.22E-07**	**6.40E-07**	**7.43E-08**	**3.74E-08**	**9.74E-07**	
5	**194**	**3**	**Surface**	**Percent**		**23%**	**66%**	**8%**	**4%**		
5	194	4	Surface	Chromium	4.84E+01			8.98E-08		8.98E-08	42%
5	194	4	Surface	Mercury	8.92E+00					0.00E+00	0%
5	194	4	Surface	Nickel	6.91E+01			3.97E-10		3.97E-10	0%
5	194	4	Surface	Silver	1.18E+01					0.00E+00	0%
5	194	4	Surface	Total PAH	7.30E-02	5.21E-09	6.37E-08	1.06E-10		6.90E-08	32%
5	194	4	Surface	Uranium-238	1.73E+00	6.36E-09		1.83E-10	5.04E-08	5.70E-08	26%
5	**194**	**4**	**Surface**	**Totals**		**1.16E-08**	**6.37E-08**	**9.05E-08**	**5.04E-08**	**2.16E-07**	
5	**194**	**4**	**Surface**	**Percent**		**5%**	**29%**	**42%**	**23%**		
5	194	5	Surface	Chromium	4.58E+01			8.50E-08		8.50E-08	55%
5	194	5	Surface	Mercury	8.69E+00					0.00E+00	0%
5	194	5	Surface	Nickel	7.54E+01			4.33E-10		4.33E-10	0%
5	194	5	Surface	Silver	1.25E+01					0.00E+00	0%
5	194	5	Surface	Total PAH	2.37E-02	1.69E-09	2.07E-08	3.43E-11		2.24E-08	15%
5	194	5	Surface	Uranium-238	1.38E+00	5.07E-09		1.46E-10	4.02E-08	4.54E-08	30%
5	**194**	**5**	**Surface**	**Totals**		**6.76E-09**	**2.07E-08**	**8.56E-08**	**4.02E-08**	**1.53E-07**	
5	**194**	**5**	**Surface**	**Percent**		**4%**	**13%**	**56%**	**26%**		
5	194	6	Surface	Chromium	3.70E+01			6.87E-08		6.87E-08	61%
5	194	6	Surface	Manganese	1.08E+03					0.00E+00	0%
5	194	6	Surface	Nickel	8.06E+01			4.63E-10		4.63E-10	0%
5	194	6	Surface	Silver	9.89E+00					0.00E+00	0%
5	194	6	Surface	Uranium-238	1.32E+00	4.85E-09		1.39E-10	3.85E-08	4.35E-08	39%
5	**194**	**6**	**Surface**	**Totals**		**4.85E-09**		**6.93E-08**	**3.85E-08**	**1.13E-07**	
5	**194**	**6**	**Surface**	**Percent**		**4%**		**62%**	**34%**		
5	194	7	Surface	Chromium	5.32E+01			9.87E-08		9.87E-08	100%
5	194	7	Surface	Nickel	7.71E+01			4.43E-10		4.43E-10	0%
5	194	7	Surface	Silver	1.25E+01					0.00E+00	0%
5	**194**	**7**	**Surface**	**Totals**				**9.92E-08**		**9.92E-08**	
5	**194**	**7**	**Surface**	**Percent**				**100%**			
5	194	8	Surface	Bis(2-ethylhexyl)phthalate	1.50E+01	2.05E-09	1.93E-08	7.95E-13		2.14E-08	3%
5	194	8	Surface	Chromium	5.36E+01			9.94E-08		9.94E-08	16%
5	194	8	Surface	Manganese	8.00E+02					0.00E+00	0%
5	194	8	Surface	Total PAH	4.85E-01	3.46E-08	4.23E-07	7.02E-10		4.59E-07	73%
5	194	8	Surface	Uranium-238	1.39E+00	5.11E-09		1.47E-10	4.05E-08	4.58E-08	7%
5	**194**	**8**	**Surface**	**Totals**		**4.18E-08**	**4.43E-07**	**1.00E-07**	**4.05E-08**	**6.25E-07**	
5	**194**	**8**	**Surface**	**Percent**		**7%**	**71%**	**16%**	**6%**		
5	194	9	Surface	Arsenic	1.14E+01	1.68E-07	4.73E-07	1.09E-09		6.41E-07	87%
5	194	9	Surface	Chromium	5.17E+01			9.59E-08		9.59E-08	13%
5	**194**	**9**	**Surface**	**Totals**		**1.68E-07**	**4.73E-07**	**9.69E-08**		**7.37E-07**	
5	**194**	**9**	**Surface**	**Percent**		**23%**	**64%**	**13%**			
5	194	10	Surface	Arsenic	1.22E+01	1.78E-07	5.03E-07	1.16E-09		6.83E-07	48%
5	194	10	Surface	Cesium-137	5.81E-01	4.40E-10		7.81E-14	3.77E-07	3.78E-07	27%
5	194	10	Surface	Chromium	3.63E+01			6.74E-08		6.74E-08	5%
5	194	10	Surface	Nickel	7.60E+01			4.37E-10		4.37E-10	0%
5	194	10	Surface	Total PAH	2.57E-01	1.84E-08	2.24E-07	3.72E-10		2.43E-07	17%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	10	Surface	Uranium-238	1.49E+00	5.48E-09		1.57E-10	4.34E-08	4.91E-08	3%
5	**194**	**10**	**Surface**	**Totals**		**2.03E-07**	**7.28E-07**	**6.95E-08**	**4.21E-07**	**1.42E-06**	
5	**194**	**10**	**Surface**	**Percent**		**14%**	**51%**	**5%**	**30%**		
5	194	11	Surface	Chromium	3.27E+01			6.07E-08		6.07E-08	38%
5	194	11	Surface	Mercury	8.09E+00					0.00E+00	0%
5	194	11	Surface	Nickel	1.01E+02			5.78E-10		5.78E-10	0%
5	194	11	Surface	PCB, Total	8.40E-02	1.64E-09	2.16E-08	1.79E-09		2.51E-08	16%
5	194	11	Surface	Silver	1.33E+01					0.00E+00	0%
5	194	11	Surface	Total PAH	7.95E-02	5.68E-09	6.94E-08	1.15E-10		7.52E-08	47%
5	**194**	**11**	**Surface**	**Totals**		**7.32E-09**	**9.10E-08**	**6.31E-08**		**1.62E-07**	
5	**194**	**11**	**Surface**	**Percent**		**5%**	**56%**	**39%**			
5	194	12	Surface	Chromium	6.34E+01			1.18E-07		1.18E-07	12%
5	194	12	Surface	Nickel	7.86E+01			4.52E-10		4.52E-10	0%
5	194	12	Surface	Silver	1.20E+01					0.00E+00	0%
5	194	12	Surface	Total PAH	8.91E-01	6.37E-08	7.78E-07	1.29E-09		8.43E-07	88%
5	**194**	**12**	**Surface**	**Totals**		**6.37E-08**	**7.78E-07**	**1.19E-07**		**9.61E-07**	
5	**194**	**12**	**Surface**	**Percent**		**7%**	**81%**	**12%**			
5	194	13	Surface	Chromium	4.77E+01			8.84E-08		8.84E-08	50%
5	194	13	Surface	Nickel	6.03E+01			3.46E-10		3.46E-10	0%
5	194	13	Surface	Total PAH	9.13E-02	6.52E-09	7.97E-08	1.32E-10		8.64E-08	49%
5	**194**	**13**	**Surface**	**Totals**		**6.52E-09**	**7.97E-08**	**8.89E-08**		**1.75E-07**	
5	**194**	**13**	**Surface**	**Percent**		**4%**	**46%**	**51%**			
5	194	14	Surface	Chromium	5.21E+01			9.67E-08		9.67E-08	100%
5	194	14	Surface	Mercury	8.14E+00					0.00E+00	0%
5	**194**	**14**	**Surface**	**Totals**				**9.67E-08**		**9.67E-08**	
5	**194**	**14**	**Surface**	**Percent**				**100%**			
5	194	15	Surface	Chromium	5.33E+01			9.90E-08		9.90E-08	100%
5	194	15	Surface	Silver	1.03E+01					0.00E+00	0%
5	**194**	**15**	**Surface**	**Totals**				**9.90E-08**		**9.90E-08**	
5	**194**	**15**	**Surface**	**Percent**				**100%**			
5	194	16	Surface	Antimony	7.40E-01					0.00E+00	0%
5	194	16	Surface	Arsenic	1.15E+01	1.69E-07	4.77E-07	1.10E-09		6.47E-07	87%
5	194	16	Surface	Beryllium	8.70E-01			4.61E-11		4.61E-11	0%
5	194	16	Surface	Chromium	5.32E+01			9.88E-08		9.88E-08	13%
5	194	16	Surface	Nickel	7.20E+01			4.14E-10		4.14E-10	0%
5	194	16	Surface	Thallium	6.30E-01					0.00E+00	0%
5	194	16	Surface	Vanadium	4.11E+01					0.00E+00	0%
5	**194**	**16**	**Surface**	**Totals**		**1.69E-07**	**4.77E-07**	**1.00E-07**		**7.46E-07**	
5	**194**	**16**	**Surface**	**Percent**		**23%**	**64%**	**13%**			
5	194	17	Surface	Arsenic	1.16E+01	1.70E-07	4.78E-07	1.10E-09		6.49E-07	73%
5	194	17	Surface	Cadmium	1.10E+00			4.37E-11		4.37E-11	0%
5	194	17	Surface	Chromium	4.65E+01			8.63E-08		8.63E-08	10%
5	194	17	Surface	Total PAH	1.59E-01	1.13E-08	1.38E-07	2.30E-10		1.50E-07	17%
5	**194**	**17**	**Surface**	**Totals**		**1.81E-07**	**6.17E-07**	**8.76E-08**		**8.85E-07**	
5	**194**	**17**	**Surface**	**Percent**		**20%**	**70%**	**10%**			
5	194	18	Surface	Arsenic	1.06E+01	1.55E-07	4.37E-07	1.01E-09		5.94E-07	82%
5	194	18	Surface	Beryllium	7.40E-01			3.92E-11		3.92E-11	0%
5	194	18	Surface	Chromium	6.85E+01			1.27E-07		1.27E-07	18%
5	194	18	Surface	Nickel	5.78E+01			3.32E-10		3.32E-10	0%
5	**194**	**18**	**Surface**	**Totals**		**1.55E-07**	**4.37E-07**	**1.28E-07**		**7.21E-07**	
5	**194**	**18**	**Surface**	**Percent**		**22%**	**61%**	**18%**			
5	194	19	Surface	Arsenic	1.07E+01	1.57E-07	4.42E-07	1.02E-09		6.00E-07	87%
5	194	19	Surface	Chromium	4.84E+01			8.97E-08		8.97E-08	13%
5	194	19	Surface	Nickel	5.84E+01			3.35E-10		3.35E-10	0%
5	**194**	**19**	**Surface**	**Totals**		**1.57E-07**	**4.42E-07**	**9.11E-08**		**6.90E-07**	
5	**194**	**19**	**Surface**	**Percent**		**23%**	**64%**	**13%**			
5	194	20	Surface	Arsenic	1.18E+01	1.74E-07	4.90E-07	1.13E-09		6.65E-07	84%
5	194	20	Surface	Barium	3.26E+02					0.00E+00	0%
5	194	20	Surface	Beryllium	1.10E+00			5.83E-11		5.83E-11	0%

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EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	20	Surface	Chromium	5.24E+01			9.72E-08		9.72E-08	12%
5	194	20	Surface	Cobalt	2.11E+01			4.20E-09		4.20E-09	1%
5	194	20	Surface	Manganese	2.29E+03					0.00E+00	0%
5	194	20	Surface	Mercury	7.28E+00					0.00E+00	0%
5	194	20	Surface	Nickel	6.57E+01			3.77E-10		3.77E-10	0%
5	194	20	Surface	Silver	1.22E+01					0.00E+00	0%
5	194	20	Surface	Total PAH	3.10E-02	2.21E-09	2.71E-08	4.49E-11		2.93E-08	4%
5	194	20	Surface	Vanadium	3.81E+01					0.00E+00	0%
5	**194**	**20**	**Surface**	**Totals**		**1.76E-07**	**5.17E-07**	**1.03E-07**		**7.96E-07**	
5	**194**	**20**	**Surface**	**Percent**		**22%**	**65%**	**13%**			
5	194	21	Surface	Antimony	9.30E-01					0.00E+00	0%
5	194	21	Surface	Chromium	5.51E+01			1.02E-07		1.02E-07	100%
5	194	21	Surface	Mercury	6.62E+00					0.00E+00	0%
5	194	21	Surface	Nickel	7.01E+01			4.03E-10		4.03E-10	0%
5	194	21	Surface	Thallium	6.40E-01					0.00E+00	0%
5	**194**	**21**	**Surface**	**Totals**				**1.03E-07**		**1.03E-07**	
5	**194**	**21**	**Surface**	**Percent**				**100%**			
5	194	22	Surface	Chromium	4.90E+01			9.09E-08		9.09E-08	3%
5	194	22	Surface	Manganese	8.19E+02					0.00E+00	0%
5	194	22	Surface	PCB, Total	1.09E+01	2.14E-07	2.81E-06	2.32E-07		3.26E-06	97%
5	**194**	**22**	**Surface**	**Totals**		**2.14E-07**	**2.81E-06**	**3.23E-07**		**3.35E-06**	
5	**194**	**22**	**Surface**	**Percent**		**6%**	**84%**	**10%**			
5	194	23	Surface	Arsenic	1.16E+01	1.70E-07	4.78E-07	1.10E-09		6.49E-07	84%
5	194	23	Surface	Chromium	6.60E+01			1.22E-07		1.22E-07	16%
5	194	23	Surface	Iron	1.83E+04					0.00E+00	0%
5	194	23	Surface	Nickel	8.77E+01			5.04E-10		5.04E-10	0%
5	194	23	Surface	Silver	1.15E+01					0.00E+00	0%
5	**194**	**23**	**Surface**	**Totals**		**1.70E-07**	**4.78E-07**	**1.24E-07**		**7.72E-07**	
5	**194**	**23**	**Surface**	**Percent**		**22%**	**62%**	**16%**			
5	194	24	Surface	Chromium	5.02E+01			9.32E-08		9.32E-08	81%
5	194	24	Surface	Nickel	7.08E+01			4.07E-10		4.07E-10	0%
5	194	24	Surface	Total PAH	2.28E-02	1.63E-09	1.99E-08	3.30E-11		2.16E-08	19%
5	**194**	**24**	**Surface**	**Totals**		**1.63E-09**	**1.99E-08**	**9.36E-08**		**1.15E-07**	
5	**194**	**24**	**Surface**	**Percent**		**1%**	**17%**	**81%**			
5	194	25	Surface	Barium	3.00E+02					0.00E+00	0%
5	194	25	Surface	Chromium	6.13E+01			1.14E-07		1.14E-07	85%
5	194	25	Surface	Manganese	9.96E+02					0.00E+00	0%
5	194	25	Surface	Nickel	6.33E+01			3.64E-10		3.64E-10	0%
5	194	25	Surface	Total PAH	2.06E-02	1.47E-09	1.80E-08	2.98E-11		1.95E-08	15%
5	**194**	**25**	**Surface**	**Totals**		**1.47E-09**	**1.80E-08**	**1.14E-07**		**1.34E-07**	
5	**194**	**25**	**Surface**	**Percent**		**1%**	**13%**	**85%**			
5	194	26	Surface	Beryllium	7.00E-01			3.71E-11		3.71E-11	0%
5	194	26	Surface	Chromium	4.18E+01			7.76E-08		7.76E-08	100%
5	194	26	Surface	Silver	1.03E+01					0.00E+00	0%
5	194	26	Surface	Thallium	3.90E-01					0.00E+00	0%
5	**194**	**26**	**Surface**	**Totals**				**7.77E-08**		**7.77E-08**	
5	**194**	**26**	**Surface**	**Percent**				**100%**			
5	194	27	Surface	Chromium	5.22E+01			9.68E-08		9.68E-08	100%
5	194	27	Surface	Nickel	6.55E+01			3.76E-10		3.76E-10	0%
5	194	27	Surface	Silver	1.01E+01					0.00E+00	0%
5	**194**	**27**	**Surface**	**Totals**				**9.72E-08**		**9.72E-08**	
5	**194**	**27**	**Surface**	**Percent**				**100%**			
5	194	28	Surface	Arsenic	1.20E+01	1.77E-07	4.98E-07	1.15E-09		6.76E-07	86%
5	194	28	Surface	Beryllium	7.10E-01			3.76E-11		3.76E-11	0%
5	194	28	Surface	Chromium	6.07E+01			1.13E-07		1.13E-07	14%
5	194	28	Surface	Manganese	1.14E+03					0.00E+00	0%
5	194	28	Surface	Nickel	6.95E+01			3.99E-10		3.99E-10	0%
5	194	28	Surface	Silver	1.08E+01					0.00E+00	0%
5	194	28	Surface	Vanadium	4.06E+01					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	**194**	**28**	**Surface**	**Totals**		**1.77E-07**	**4.98E-07**	**1.14E-07**		**7.89E-07**	
5	**194**	**28**	**Surface**	**Percent**		**22%**	**63%**	**14%**			
5	194	29	Surface	Antimony	7.10E-01					0.00E+00	0%
5	194	29	Surface	Chromium	5.06E+01			9.38E-08		9.38E-08	100%
5	194	29	Surface	Nickel	6.51E+01			3.74E-10		3.74E-10	0%
5	194	29	Surface	Silver	9.77E+00					0.00E+00	0%
5	**194**	**29**	**Surface**	**Totals**				**9.42E-08**		**9.42E-08**	
5	**194**	**29**	**Surface**	**Percent**				**100%**			
5	194	30	Surface	Chromium	5.66E+01			1.05E-07		1.05E-07	100%
5	194	30	Surface	Mercury	8.80E+00					0.00E+00	0%
5	194	30	Surface	Nickel	6.99E+01			4.01E-10		4.01E-10	0%
5	194	30	Surface	Silver	9.76E+00					0.00E+00	0%
5	**194**	**30**	**Surface**	**Totals**				**1.05E-07**		**1.05E-07**	
5	**194**	**30**	**Surface**	**Percent**				**100%**			
5	194	31	Surface	Cesium-137	5.70E-01	4.32E-10		7.66E-14	3.70E-07	3.71E-07	87%
5	194	31	Surface	Uranium-238	1.72E+00	6.32E-09		1.82E-10	5.01E-08	5.66E-08	13%
5	**194**	**31**	**Surface**	**Totals**		**6.75E-09**		**1.82E-10**	**4.20E-07**	**4.27E-07**	
5	**194**	**31**	**Surface**	**Percent**		**2%**		**0%**	**98%**		
5	196	1	Surface	Antimony	5.90E-01					0.00E+00	0%
5	196	1	Surface	Chromium	1.96E+01			3.64E-08		3.64E-08	24%
5	196	1	Surface	Neptunium-237	3.11E-01	8.82E-10		6.21E-11	6.33E-08	6.42E-08	42%
5	196	1	Surface	Nickel	5.56E+02			3.19E-09		3.19E-09	2%
5	196	1	Surface	Uranium	2.33E+01					0.00E+00	0%
5	196	1	Surface	Uranium-238	1.54E+00	5.66E-09		1.63E-10	4.49E-08	5.07E-08	33%
5	**196**	**1**	**Surface**	**Totals**		**6.54E-09**		**3.98E-08**	**1.08E-07**	**1.55E-07**	
5	**196**	**1**	**Surface**	**Percent**		**4%**		**26%**	**70%**		
5	196	2	Surface	Barium	2.02E+02					0.00E+00	0%
5	196	2	Surface	Cadmium	2.53E+00			1.01E-10		1.01E-10	0%
5	196	2	Surface	Chromium	2.07E+01			3.84E-08		3.84E-08	3%
5	196	2	Surface	Nickel	7.36E+01			4.23E-10		4.23E-10	0%
5	196	2	Surface	PCB, Total	1.51E+00	2.95E-08	3.89E-07	3.21E-08		4.51E-07	37%
5	196	2	Surface	Total PAH	6.80E-01	4.86E-08	5.94E-07	9.84E-10		6.43E-07	53%
5	196	2	Surface	Uranium-238	2.21E+00	8.12E-09		2.33E-10	6.44E-08	7.28E-08	6%
5	**196**	**2**	**Surface**	**Totals**		**8.62E-08**	**9.82E-07**	**7.23E-08**	**6.44E-08**	**1.21E-06**	
5	**196**	**2**	**Surface**	**Percent**		**7%**	**82%**	**6%**	**5%**		
5	489	1	Surface	Chromium	4.16E+01			7.73E-08		7.73E-08	38%
5	489	1	Surface	Nickel	7.88E+01			4.53E-10		4.53E-10	0%
5	489	1	Surface	Total PAH	8.22E-02	5.87E-09	7.17E-08	1.19E-10		7.77E-08	38%
5	489	1	Surface	Uranium-238	1.47E+00	5.40E-09		1.55E-10	4.29E-08	4.84E-08	24%
5	**489**	**1**	**Surface**	**Totals**		**1.13E-08**	**7.17E-08**	**7.80E-08**	**4.29E-08**	**2.04E-07**	
5	**489**	**1**	**Surface**	**Percent**		**6%**	**35%**	**38%**	**21%**		
5	531	1	Surface	Antimony	1.00E+00					0.00E+00	0%
5	531	1	Surface	Arsenic	4.68E+01	6.87E-07	1.94E-06	4.46E-09		2.63E-06	90%
5	531	1	Surface	Cadmium	3.10E+00			1.23E-10		1.23E-10	0%
5	531	1	Surface	Chromium	5.05E+01			9.36E-08		9.36E-08	3%
5	531	1	Surface	Iron	5.68E+04					0.00E+00	0%
5	531	1	Surface	Nickel	1.62E+02			9.32E-10		9.32E-10	0%
5	531	1	Surface	Total PAH	5.34E-02	3.81E-09	4.66E-08	7.72E-11		5.05E-08	2%
5	531	1	Surface	Uranium	2.41E+01					0.00E+00	0%
5	531	1	Surface	Uranium-235	1.38E-01	3.94E-10		1.57E-11	1.92E-08	1.96E-08	1%
5	531	1	Surface	Uranium-238	3.48E+00	1.28E-08		3.67E-10	1.01E-07	1.15E-07	4%
5	531	1	Surface	Zinc	2.45E+03					0.00E+00	0%
5	**531**	**1**	**Surface**	**Totals**		**7.04E-07**	**1.98E-06**	**9.96E-08**	**1.21E-07**	**2.91E-06**	
5	**531**	**1**	**Surface**	**Percent**		**24%**	**68%**	**3%**	**4%**		
6	200	1	Surface	Antimony	5.60E-01					0.00E+00	0%
6	200	1	Surface	Cesium-137	5.74E-01	4.35E-10		7.71E-14	3.73E-07	3.73E-07	26%
6	200	1	Surface	Chromium	5.75E+01			1.07E-07		1.07E-07	8%
6	200	1	Surface	Mercury	6.71E+00					0.00E+00	0%
6	200	1	Surface	Nickel	1.28E+02			7.35E-10		7.35E-10	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	200	1	Surface	PCB, Total	2.60E+00	5.09E-08	6.70E-07	5.53E-08		7.76E-07	55%
6	200	1	Surface	Total PAH	2.84E-02	2.03E-09	2.48E-08	4.11E-11		2.69E-08	2%
6	200	1	Surface	Uranium	2.73E+01					0.00E+00	0%
6	200	1	Surface	Uranium-235	1.43E-01	4.08E-10		1.63E-11	1.99E-08	2.03E-08	1%
6	200	1	Surface	Uranium-238	3.58E+00	1.31E-08		3.78E-10	1.04E-07	1.18E-07	8%
6	**200**	**1**	**Surface**	**Totals**		**6.69E-08**	**6.94E-07**	**1.63E-07**	**4.97E-07**	**1.42E-06**	
6	**200**	**1**	**Surface**	**Percent**		**5%**	**49%**	**11%**	**35%**		
6	212	1	Surface	Arsenic	1.44E+01	2.12E-07	5.97E-07	1.37E-09		8.10E-07	24%
6	212	1	Surface	Beryllium	8.10E-01			4.30E-11		4.30E-11	0%
6	212	1	Surface	Cesium-137	6.01E-01	4.55E-10		8.07E-14	3.90E-07	3.91E-07	11%
6	212	1	Surface	Chromium	3.58E+01			6.64E-08		6.64E-08	2%
6	212	1	Surface	Cobalt-60	8.76E-03	6.18E-12		3.54E-15	2.78E-08	2.78E-08	1%
6	212	1	Surface	Iron	4.14E+04					0.00E+00	0%
6	212	1	Surface	Neptunium-237	4.00E+00	1.13E-08		7.99E-10	8.14E-07	8.26E-07	24%
6	212	1	Surface	Nickel	8.69E+01			4.99E-10		4.99E-10	0%
6	212	1	Surface	PCB, Total	1.80E-01	3.52E-09	4.64E-08	3.83E-09		5.37E-08	2%
6	212	1	Surface	Plutonium-239/240	6.71E+00	3.24E-08		2.52E-09	3.43E-10	3.53E-08	1%
6	212	1	Surface	Thorium-230	2.60E+02	9.19E-07		8.37E-08	5.45E-08	1.06E-06	31%
6	212	1	Surface	Uranium	2.30E+01					0.00E+00	0%
6	212	1	Surface	Uranium-235	2.09E-01	5.96E-10		2.38E-11	2.90E-08	2.96E-08	1%
6	212	1	Surface	Uranium-238	3.17E+00	1.16E-08		3.35E-10	9.24E-08	1.04E-07	3%
6	**212**	**1**	**Surface**	**Totals**		**1.19E-06**	**6.43E-07**	**1.60E-07**	**1.41E-06**	**3.40E-06**	
6	**212**	**1**	**Surface**	**Percent**		**35%**	**19%**	**5%**	**41%**		
6	213	1	Surface	Antimony	8.50E-01					0.00E+00	0%
6	213	1	Surface	Chromium	4.78E+01			8.87E-08		8.87E-08	25%
6	213	1	Surface	Nickel	6.67E+01			3.83E-10		3.83E-10	0%
6	213	1	Surface	PCB, Total	7.30E-02	1.43E-09	1.88E-08	1.55E-09		2.18E-08	6%
6	213	1	Surface	Silver	1.32E+01					0.00E+00	0%
6	213	1	Surface	Total PAH	1.72E-01	1.23E-08	1.50E-07	2.49E-10		1.63E-07	46%
6	213	1	Surface	Uranium-238	2.33E+00	8.56E-09		2.46E-10	6.79E-08	7.67E-08	22%
6	**213**	**1**	**Surface**	**Totals**		**2.23E-08**	**1.69E-07**	**9.12E-08**	**6.79E-08**	**3.50E-07**	
6	**213**	**1**	**Surface**	**Percent**		**6%**	**48%**	**26%**	**19%**		
6	213	2	Surface	Chromium	4.48E+01			8.32E-08		8.32E-08	99%
6	213	2	Surface	Nickel	9.10E+01			5.23E-10		5.23E-10	1%
6	213	2	Surface	Silver	1.13E+01					0.00E+00	0%
6	**213**	**2**	**Surface**	**Totals**				**8.37E-08**		**8.37E-08**	
6	**213**	**2**	**Surface**	**Percent**				**100%**			
6	214	1	Surface	Antimony	5.70E-01					0.00E+00	
6	**214**	**1**	**Surface**	**Totals**						**0.00E+00**	
6	**214**	**1**	**Surface**	**Percent**							
6	215	1	Surface	Antimony	6.80E-01					0.00E+00	0%
6	215	1	Surface	Chromium	5.73E+01			1.06E-07		1.06E-07	58%
6	215	1	Surface	Iron	3.87E+04					0.00E+00	0%
6	215	1	Surface	Nickel	7.32E+01			4.20E-10		4.20E-10	0%
6	215	1	Surface	Total PAH	8.09E-02	5.78E-09	7.06E-08	1.17E-10		7.65E-08	42%
6	**215**	**1**	**Surface**	**Totals**		**5.78E-09**	**7.06E-08**	**1.07E-07**		**1.83E-07**	
6	**215**	**1**	**Surface**	**Percent**		**3%**	**39%**	**58%**			
6	216	1	Surface	Chromium	2.38E+01			4.42E-08		4.42E-08	19%
6	216	1	Surface	Total PAH	1.49E-01	1.07E-08	1.30E-07	2.16E-10		1.41E-07	62%
6	216	1	Surface	Uranium-238	1.33E+00	4.89E-09		1.40E-10	3.88E-08	4.38E-08	19%
6	**216**	**1**	**Surface**	**Totals**		**1.56E-08**	**1.30E-07**	**4.45E-08**	**3.88E-08**	**2.29E-07**	
6	**216**	**1**	**Surface**	**Percent**		**7%**	**57%**	**19%**	**17%**		
6	217	1	Surface	Chromium	8.58E+01			1.59E-07		1.59E-07	79%
6	217	1	Surface	Cobalt	1.96E+01			3.89E-09		3.89E-09	2%
6	217	1	Surface	Manganese	7.70E+02					0.00E+00	0%
6	217	1	Surface	Nickel	8.54E+01			4.91E-10		4.91E-10	0%
6	217	1	Surface	Silver	1.35E+01					0.00E+00	0%
6	217	1	Surface	Uranium-238	1.15E+00	4.24E-09		1.22E-10	3.36E-08	3.80E-08	19%
6	**217**	**1**	**Surface**	**Totals**		**4.24E-09**		**1.64E-07**	**3.36E-08**	**2.02E-07**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	**217**	**1**	**Surface**	**Percent**		**2%**		**81%**	**17%**		
6	217	2	Surface	Antimony	1.70E+00					0.00E+00	0%
6	217	2	Surface	Arsenic	1.12E+01	1.64E-07	4.62E-07	1.06E-09		6.27E-07	48%
6	217	2	Surface	Chromium	1.02E+02			1.89E-07		1.89E-07	15%
6	217	2	Surface	Cobalt	1.74E+01			3.46E-09		3.46E-09	0%
6	217	2	Surface	Iron	3.09E+04					0.00E+00	0%
6	217	2	Surface	Manganese	8.44E+02					0.00E+00	0%
6	217	2	Surface	Mercury	8.59E+00					0.00E+00	0%
6	217	2	Surface	Nickel	9.74E+01			5.59E-10		5.59E-10	0%
6	217	2	Surface	Silver	1.61E+01					0.00E+00	0%
6	217	2	Surface	Total PAH	5.05E-01	3.61E-08	4.41E-07	7.31E-10		4.78E-07	37%
6	**217**	**2**	**Surface**	**Totals**		**2.00E-07**	**9.03E-07**	**1.94E-07**		**1.30E-06**	
6	**217**	**2**	**Surface**	**Percent**		**15%**	**70%**	**15%**			
6	221	1	Surface	Barium	2.21E+02					0.00E+00	0%
6	221	1	Surface	Chromium	7.01E+01			1.30E-07		1.30E-07	10%
6	221	1	Surface	Iron	1.90E+04					0.00E+00	0%
6	221	1	Surface	Nickel	7.93E+01			4.55E-10		4.55E-10	0%
6	221	1	Surface	PCB, Total	5.00E-01	9.78E-09	1.29E-07	1.06E-08		1.49E-07	11%
6	221	1	Surface	Total PAH	1.02E+00	7.30E-08	8.93E-07	1.48E-09		9.67E-07	74%
6	221	1	Surface	Uranium	1.64E+01					0.00E+00	0%
6	221	1	Surface	Uranium-238	1.93E+00	7.09E-09		2.04E-10	5.63E-08	6.36E-08	5%
6	**221**	**1**	**Surface**	**Totals**		**8.99E-08**	**1.02E-06**	**1.43E-07**	**5.63E-08**	**1.31E-06**	
6	**221**	**1**	**Surface**	**Percent**		**7%**	**78%**	**11%**	**4%**		
6	222	1	Surface	Chromium	4.73E+01			8.78E-08		8.78E-08	6%
6	222	1	Surface	Nickel	9.19E+01			5.28E-10		5.28E-10	0%
6	222	1	Surface	PCB, Total	1.40E+00	2.74E-08	3.61E-07	2.98E-08		4.18E-07	29%
6	222	1	Surface	Total PAH	1.77E-01	1.27E-08	1.55E-07	2.56E-10		1.68E-07	12%
6	222	1	Surface	Uranium	2.80E+01					0.00E+00	0%
6	222	1	Surface	Uranium-234	1.04E+01	2.88E-08		1.34E-09	6.70E-10	3.08E-08	2%
6	222	1	Surface	Uranium-235	7.10E-01	2.03E-09		8.10E-11	9.86E-08	1.01E-07	7%
6	222	1	Surface	Uranium-238	1.96E+01	7.20E-08		2.07E-09	5.71E-07	6.45E-07	44%
6	**222**	**1**	**Surface**	**Totals**		**1.43E-07**	**5.15E-07**	**1.22E-07**	**6.71E-07**	**1.45E-06**	
6	**222**	**1**	**Surface**	**Percent**		**10%**	**36%**	**8%**	**46%**		
6	227	1	Surface	Beryllium	5.52E-01			2.93E-11		2.93E-11	0%
6	227	1	Surface	Cesium-137	1.90E-01	1.44E-10		2.55E-14	1.23E-07	1.24E-07	3%
6	227	1	Surface	Chromium	4.71E+01			8.75E-08		8.75E-08	2%
6	227	1	Surface	Cobalt-60	1.53E-02	1.08E-11		6.18E-15	4.85E-08	4.85E-08	1%
6	227	1	Surface	Neptunium-237	9.05E-01	2.57E-09		1.81E-10	1.84E-07	1.87E-07	5%
6	227	1	Surface	Nickel	2.03E+02			1.17E-09		1.17E-09	0%
6	227	1	Surface	PCB, Total	4.14E+00	8.11E-08	1.07E-06	8.82E-08		1.24E-06	33%
6	227	1	Surface	Technetium-99	4.77E+01	6.40E-09		7.60E-12	9.93E-10	7.40E-09	0%
6	227	1	Surface	Total PAH	3.38E-01	2.41E-08	2.95E-07	4.89E-10		3.19E-07	8%
6	227	1	Surface	Uranium	1.02E+02					0.00E+00	0%
6	227	1	Surface	Uranium-234	1.54E+01	4.27E-08		1.99E-09	9.95E-10	4.57E-08	1%
6	227	1	Surface	Uranium-235	1.49E+00	4.25E-09		1.70E-10	2.07E-07	2.11E-07	6%
6	227	1	Surface	Uranium-238	4.63E+01	1.70E-07		4.89E-09	1.35E-06	1.52E-06	40%
6	**227**	**1**	**Surface**	**Totals**		**3.31E-07**	**1.36E-06**	**1.85E-07**	**1.91E-06**	**3.79E-06**	
6	**227**	**1**	**Surface**	**Percent**		**9%**	**36%**	**5%**	**50%**		
6	227	2	Surface	Beryllium	5.32E-01			2.82E-11		2.82E-11	0%
6	227	2	Surface	Chromium	5.63E+01			1.05E-07		1.05E-07	5%
6	227	2	Surface	Cobalt	8.99E+00			1.79E-09		1.79E-09	0%
6	227	2	Surface	Cobalt-60	1.37E-02	9.66E-12		5.54E-15	4.34E-08	4.34E-08	2%
6	227	2	Surface	Mercury	8.41E+00					0.00E+00	0%
6	227	2	Surface	Nickel	1.25E+02			7.17E-10		7.17E-10	0%
6	227	2	Surface	PCB, Total	5.82E+00	1.14E-07	1.50E-06	1.24E-07		1.74E-06	85%
6	227	2	Surface	Total PAH	1.16E-01	8.26E-09	1.01E-07	1.67E-10		1.09E-07	5%
6	227	2	Surface	Uranium	1.51E+01					0.00E+00	0%
6	227	2	Surface	Uranium-238	1.57E+00	5.78E-09		1.66E-10	4.59E-08	5.18E-08	3%
6	**227**	**2**	**Surface**	**Totals**		**1.28E-07**	**1.60E-06**	**2.31E-07**	**8.93E-08**	**2.05E-06**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	**227**	**2**	**Surface**	**Percent**		**6%**	**78%**	**11%**	**4%**		
6	228	1	Surface	Antimony	6.30E-01					0.00E+00	0%
6	228	1	Surface	Cadmium	3.90E+00			1.55E-10		1.55E-10	0%
6	228	1	Surface	Chromium	1.89E+02			3.51E-07		3.51E-07	48%
6	228	1	Surface	Mercury	9.37E+00					0.00E+00	0%
6	228	1	Surface	Neptunium-237	8.00E-01	2.27E-09		1.60E-10	1.63E-07	1.65E-07	23%
6	228	1	Surface	Nickel	7.92E+01			4.55E-10		4.55E-10	0%
6	228	1	Surface	Silver	1.16E+01					0.00E+00	0%
6	228	1	Surface	Total PAH	6.69E-02	4.78E-09	5.84E-08	9.68E-11		6.32E-08	9%
6	228	1	Surface	Uranium	1.51E+01					0.00E+00	0%
6	228	1	Surface	Uranium-235	1.78E-01	5.08E-10		2.03E-11	2.47E-08	2.52E-08	3%
6	228	1	Surface	Uranium-238	3.77E+00	1.39E-08		3.98E-10	1.10E-07	1.24E-07	17%
6	**228**	**1**	**Surface**	**Totals**		**2.14E-08**	**5.84E-08**	**3.52E-07**	**2.97E-07**	**7.29E-07**	
6	**228**	**1**	**Surface**	**Percent**		**3%**	**8%**	**48%**	**41%**		
7	76	1	Surface	Barium	2.69E+02					0.00E+00	0%
7	76	1	Surface	PCB, Total	2.60E-01	5.09E-09	6.70E-08	5.53E-09		7.76E-08	4%
7	76	1	Surface	Total PAH	1.76E+00	1.26E-07	1.53E-06	2.54E-09		1.66E-06	93%
7	76	1	Surface	Uranium-238	1.45E+00	5.33E-09		1.53E-10	4.23E-08	4.78E-08	3%
7	**76**	**1**	**Surface**	**Totals**		**1.36E-07**	**1.60E-06**	**8.23E-09**	**4.23E-08**	**1.79E-06**	
7	**76**	**1**	**Surface**	**Percent**		**8%**	**90%**	**0%**	**2%**		
7	165	1	Surface	Antimony	2.20E+00					0.00E+00	0%
7	165	1	Surface	Arsenic	6.35E+01	9.32E-07	2.63E-06	6.05E-09		3.57E-06	28%
7	165	1	Surface	Barium	5.84E+02					0.00E+00	0%
7	165	1	Surface	Beryllium	6.82E-01			3.62E-11		3.62E-11	0%
7	165	1	Surface	Cesium-137	3.47E+00	2.63E-09		4.66E-13	2.25E-06	2.26E-06	18%
7	165	1	Surface	Chromium	3.74E+01			6.94E-08		6.94E-08	1%
7	165	1	Surface	Mercury	3.78E-01					0.00E+00	0%
7	165	1	Surface	Naphthalene	1.61E+00			4.03E-08		4.03E-08	0%
7	165	1	Surface	Neptunium-237	4.26E-01	1.21E-09		8.51E-11	8.67E-08	8.80E-08	1%
7	165	1	Surface	Nickel	3.47E+01			1.99E-10		1.99E-10	0%
7	165	1	Surface	PCB, Total	8.27E+00	1.62E-07	2.13E-06	1.76E-07		2.47E-06	19%
7	165	1	Surface	Plutonium-239/240	2.81E+00	1.35E-08		1.05E-09	1.43E-10	1.47E-08	0%
7	165	1	Surface	Silver	3.09E+01					0.00E+00	0%
7	165	1	Surface	Thorium-230	6.02E+00	2.13E-08		1.94E-09	1.26E-09	2.45E-08	0%
7	165	1	Surface	Total PAH	1.87E+00	1.33E-07	1.63E-06	2.70E-09		1.77E-06	14%
7	165	1	Surface	Uranium	1.08E+02					0.00E+00	0%
7	165	1	Surface	Uranium-234	5.76E+01	1.59E-07		7.41E-09	3.71E-09	1.70E-07	1%
7	165	1	Surface	Uranium-235	2.05E+00	5.83E-09		2.33E-10	2.84E-07	2.90E-07	2%
7	165	1	Surface	Uranium-238	6.41E+01	2.36E-07		6.77E-09	1.87E-06	2.11E-06	16%
7	**165**	**1**	**Surface**	**Totals**		**1.67E-06**	**6.39E-06**	**3.12E-07**	**4.50E-06**	**1.29E-05**	
7	**165**	**1**	**Surface**	**Percent**		**13%**	**50%**	**2%**	**35%**		
7	170	1	Surface	Neptunium-237	1.15E-01	3.26E-10		2.30E-11	2.34E-08	2.38E-08	32%
7	170	1	Surface	Uranium-238	1.53E+00	5.62E-09		1.62E-10	4.46E-08	5.04E-08	68%
7	**170**	**1**	**Surface**	**Totals**		**5.95E-09**		**1.84E-10**	**6.80E-08**	**7.41E-08**	
7	**170**	**1**	**Surface**	**Percent**		**8%**		**0%**	**92%**		
8	158	1	Surface	Antimony	5.23E-01					0.00E+00	0%
8	158	1	Surface	Arsenic	1.01E+01	1.49E-07	4.19E-07	9.65E-10		5.68E-07	48%
8	158	1	Surface	Barium	2.19E+02					0.00E+00	0%
8	158	1	Surface	Chromium	6.07E+01			1.13E-07		1.13E-07	10%
8	158	1	Surface	Cobalt	1.62E+01			3.23E-09		3.23E-09	0%
8	158	1	Surface	Manganese	9.91E+02					0.00E+00	0%
8	158	1	Surface	Mercury	1.05E+01					0.00E+00	0%
8	158	1	Surface	Nickel	7.28E+01			4.18E-10		4.18E-10	0%
8	158	1	Surface	Thallium	3.12E-01					0.00E+00	0%
8	158	1	Surface	Total PAH	3.69E-01	2.64E-08	3.22E-07	5.34E-10		3.49E-07	30%
8	158	1	Surface	Uranium	2.03E+01					0.00E+00	0%
8	158	1	Surface	Uranium-235	1.63E-01	4.65E-10		1.86E-11	2.26E-08	2.31E-08	2%
8	158	1	Surface	Uranium-238	3.79E+00	1.39E-08		4.00E-10	1.10E-07	1.25E-07	11%
8	**158**	**1**	**Surface**	**Totals**		**1.89E-07**	**7.41E-07**	**1.18E-07**	**1.33E-07**	**1.18E-06**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
8	**158**	**1**	**Surface**	**Percent**		**16%**	**63%**	**10%**	**11%**		
8	169	1	Surface	Aluminum	1.42E+04					0.00E+00	0%
8	169	1	Surface	Antimony	1.30E+00					0.00E+00	0%
8	169	1	Surface	Arsenic	2.03E+01	2.98E-07	8.40E-07	1.94E-09		1.14E-06	12%
8	169	1	Surface	Beryllium	8.00E-01			4.24E-11		4.24E-11	0%
8	169	1	Surface	Chromium	2.15E+02			3.99E-07		3.99E-07	4%
8	169	1	Surface	Copper	3.74E+02					0.00E+00	0%
8	169	1	Surface	Iron	4.16E+04					0.00E+00	0%
8	169	1	Surface	Mercury	7.87E+00					0.00E+00	0%
8	169	1	Surface	Nickel	5.49E+02			3.15E-09		3.15E-09	0%
8	169	1	Surface	PCB, Total	1.00E+01	1.96E-07	2.58E-06	2.13E-07		2.98E-06	32%
8	169	1	Surface	Thallium	4.60E-01					0.00E+00	0%
8	169	1	Surface	Total PAH	4.59E+00	3.28E-07	4.00E-06	6.64E-09		4.34E-06	47%
8	169	1	Surface	Uranium	5.03E+01					0.00E+00	0%
8	169	1	Surface	Uranium-234	6.55E+00	1.81E-08		8.43E-10	4.22E-10	1.94E-08	0%
8	169	1	Surface	Uranium-235	4.60E-01	1.31E-09		5.25E-11	6.39E-08	6.52E-08	1%
8	169	1	Surface	Uranium-238	8.12E+00	2.98E-08		8.57E-10	2.37E-07	2.67E-07	3%
8	**169**	**1**	**Surface**	**Totals**		**8.70E-07**	**7.42E-06**	**6.25E-07**	**3.01E-07**	**9.22E-06**	
8	**169**	**1**	**Surface**	**Percent**		**9%**	**81%**	**7%**	**3%**		
9	19	1	Surface	Beryllium	1.10E+00			5.83E-11		5.83E-11	0%
9	19	1	Surface	Cadmium	1.20E+00			4.77E-11		4.77E-11	0%
9	19	1	Surface	Thallium	9.80E-01					0.00E+00	0%
9	19	1	Surface	Total PAH	5.23E+00	3.73E-07	4.56E-06	7.56E-09		4.94E-06	100%
9	**19**	**1**	**Surface**	**Totals**		**3.73E-07**	**4.56E-06**	**7.67E-09**		**4.94E-06**	
9	**19**	**1**	**Surface**	**Percent**		**8%**	**92%**	**0%**			
9	138	1	Surface	Antimony	5.39E+00					0.00E+00	0%
9	138	1	Surface	Arsenic	1.06E+01	1.56E-07	4.40E-07	1.01E-09		5.96E-07	64%
9	138	1	Surface	Cadmium	5.42E+00			2.16E-10		2.16E-10	0%
9	138	1	Surface	Chromium	5.39E+01			9.99E-08		9.99E-08	11%
9	138	1	Surface	Mercury	1.30E+01					0.00E+00	0%
9	138	1	Surface	Nickel	7.04E+01			4.04E-10		4.04E-10	0%
9	138	1	Surface	PCB, Total	5.00E-01	9.78E-09	1.29E-07	1.06E-08		1.49E-07	16%
9	138	1	Surface	Silver	1.01E+01					0.00E+00	0%
9	138	1	Surface	Total PAH	9.74E-02	6.96E-09	8.50E-08	1.41E-10		9.21E-08	10%
9	**138**	**1**	**Surface**	**Totals**		**1.73E-07**	**6.53E-07**	**1.12E-07**		**9.38E-07**	
9	**138**	**1**	**Surface**	**Percent**		**18%**	**70%**	**12%**			
9	138	2	Surface	Nickel	7.99E+01			4.59E-10		4.59E-10	1%
9	138	2	Surface	PCB, Total	9.20E-02	1.80E-09	2.37E-08	1.96E-09		2.75E-08	43%
9	138	2	Surface	Silver	1.04E+01					0.00E+00	0%
9	138	2	Surface	Total PAH	3.84E-02	2.74E-09	3.35E-08	5.56E-11		3.63E-08	57%
9	**138**	**2**	**Surface**	**Totals**		**4.54E-09**	**5.72E-08**	**2.47E-09**		**6.42E-08**	
9	**138**	**2**	**Surface**	**Percent**		**7%**	**89%**	**4%**			
9	180	1	Surface	Antimony	5.80E-01					0.00E+00	0%
9	180	1	Surface	Arsenic	7.48E+01	1.10E-06	3.10E-06	7.13E-09		4.20E-06	98%
9	180	1	Surface	Chromium	5.54E+01			1.03E-07		1.03E-07	2%
9	180	1	Surface	Mercury	8.28E+00					0.00E+00	0%
9	180	1	Surface	Nickel	8.77E+01			5.04E-10		5.04E-10	0%
9	**180**	**1**	**Surface**	**Totals**		**1.10E-06**	**3.10E-06**	**1.11E-07**		**4.30E-06**	
9	**180**	**1**	**Surface**	**Percent**		**26%**	**72%**	**3%**			
9	180	2	Surface	Antimony	4.58E-01					0.00E+00	0%
9	180	2	Surface	Arsenic	1.27E+01	1.86E-07	5.24E-07	1.21E-09		7.10E-07	81%
9	180	2	Surface	Chromium	4.46E+01			8.28E-08		8.28E-08	9%
9	180	2	Surface	Nickel	8.42E+01			4.83E-10		4.83E-10	0%
9	180	2	Surface	Total PAH	9.19E-02	6.56E-09	8.02E-08	1.33E-10		8.69E-08	10%
9	**180**	**2**	**Surface**	**Totals**		**1.92E-07**	**6.04E-07**	**8.47E-08**		**8.81E-07**	
9	**180**	**2**	**Surface**	**Percent**		**22%**	**69%**	**10%**			
9	180	3	Surface	Arsenic	1.34E+01	1.96E-07	5.53E-07	1.27E-09		7.50E-07	90%
9	180	3	Surface	Chromium	4.69E+01			8.71E-08		8.71E-08	10%
9	180	3	Surface	Nickel	6.77E+01			3.89E-10		3.89E-10	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	180	3	Surface	Silver	1.14E+01					0.00E+00	0%
9	**180**	**3**	**Surface**	**Totals**		**1.96E-07**	**5.53E-07**	**8.88E-08**		**8.37E-07**	
9	**180**	**3**	**Surface**	**Percent**		**23%**	**66%**	**11%**			
9	180	4	Surface	Arsenic	1.15E+01	1.69E-07	4.77E-07	1.10E-09		6.48E-07	83%
9	180	4	Surface	Barium	2.13E+02					0.00E+00	0%
9	180	4	Surface	Beryllium	1.60E+00			8.48E-11		8.48E-11	0%
9	180	4	Surface	Chromium	6.00E+01			1.11E-07		1.11E-07	14%
9	180	4	Surface	Iron	1.54E+04					0.00E+00	0%
9	180	4	Surface	Manganese	7.09E+02					0.00E+00	0%
9	180	4	Surface	Nickel	6.46E+01			3.71E-10		3.71E-10	0%
9	180	4	Surface	Silver	9.68E+00					0.00E+00	0%
9	180	4	Surface	Total PAH	2.15E-02	1.54E-09	1.88E-08	3.11E-11		2.03E-08	3%
9	180	4	Surface	Vanadium	4.85E+01					0.00E+00	0%
9	**180**	**4**	**Surface**	**Totals**		**1.71E-07**	**4.96E-07**	**1.13E-07**		**7.80E-07**	
9	**180**	**4**	**Surface**	**Percent**		**22%**	**64%**	**14%**			
9	181	1	Surface	Chromium	2.29E+01			4.24E-08		4.24E-08	57%
9	181	1	Surface	Thallium	3.50E+00					0.00E+00	0%
9	181	1	Surface	Total PAH	3.43E-02	2.45E-09	2.99E-08	4.96E-11		3.24E-08	43%
9	**181**	**1**	**Surface**	**Totals**		**2.45E-09**	**2.99E-08**	**4.25E-08**		**7.48E-08**	
9	**181**	**1**	**Surface**	**Percent**		**3%**	**40%**	**57%**			
9	195	1	Surface	Chromium	6.33E+01			1.17E-07		1.17E-07	100%
9	195	1	Surface	Nickel	7.02E+01			4.03E-10		4.03E-10	0%
9	195	1	Surface	Silver	9.37E+00					0.00E+00	0%
9	**195**	**1**	**Surface**	**Totals**				**1.18E-07**		**1.18E-07**	
9	**195**	**1**	**Surface**	**Percent**				**100%**			
9	195	2	Surface	Chromium	4.52E+01			8.39E-08		8.39E-08	77%
9	195	2	Surface	Silver	9.48E+00					0.00E+00	0%
9	195	2	Surface	Total PAH	2.68E-02	1.91E-09	2.34E-08	3.88E-11		2.53E-08	23%
9	**195**	**2**	**Surface**	**Totals**		**1.91E-09**	**2.34E-08**	**8.39E-08**		**1.09E-07**	
9	**195**	**2**	**Surface**	**Percent**		**2%**	**21%**	**77%**			
9	195	3	Surface	Chromium	5.03E+01			9.34E-08		9.34E-08	71%
9	195	3	Surface	Nickel	5.22E+01			3.00E-10		3.00E-10	0%
9	195	3	Surface	Total PAH	4.06E-02	2.90E-09	3.54E-08	5.87E-11		3.84E-08	29%
9	**195**	**3**	**Surface**	**Totals**		**2.90E-09**	**3.54E-08**	**9.37E-08**		**1.32E-07**	
9	**195**	**3**	**Surface**	**Percent**		**2%**	**27%**	**71%**			
9	195	4	Surface	Chromium	5.29E+01			9.82E-08		9.82E-08	100%
9	195	4	Surface	Nickel	6.23E+01			3.58E-10		3.58E-10	0%
9	**195**	**4**	**Surface**	**Totals**				**9.85E-08**		**9.85E-08**	
9	**195**	**4**	**Surface**	**Percent**				**100%**			
9	195	5	Surface	Chromium	5.74E+01			1.07E-07		1.07E-07	82%
9	195	5	Surface	Nickel	8.11E+01			4.66E-10		4.66E-10	0%
9	195	5	Surface	Total PAH	2.40E-02	1.71E-09	2.09E-08	3.47E-11		2.27E-08	17%
9	**195**	**5**	**Surface**	**Totals**		**1.71E-09**	**2.09E-08**	**1.07E-07**		**1.30E-07**	
9	**195**	**5**	**Surface**	**Percent**		**1%**	**16%**	**83%**			
9	195	6	Surface	Chromium	4.45E+01			8.27E-08		8.27E-08	26%
9	195	6	Surface	Nickel	8.71E+01			5.00E-10		5.00E-10	0%
9	195	6	Surface	Total PAH	2.48E-01	1.77E-08	2.16E-07	3.58E-10		2.34E-07	74%
9	**195**	**6**	**Surface**	**Totals**		**1.77E-08**	**2.16E-07**	**8.35E-08**		**3.17E-07**	
9	**195**	**6**	**Surface**	**Percent**		**6%**	**68%**	**26%**			
9	195	7	Surface	Chromium	4.93E+01			9.14E-08		9.14E-08	100%
9	195	7	Surface	Silver	8.06E+00					0.00E+00	0%
9	**195**	**7**	**Surface**	**Totals**				**9.14E-08**		**9.14E-08**	
9	**195**	**7**	**Surface**	**Percent**				**100%**			
9	195	8	Surface	Arsenic	1.16E+01	1.70E-07	4.78E-07	1.10E-09		6.49E-07	66%
9	195	8	Surface	Beryllium	7.40E-01			3.92E-11		3.92E-11	0%
9	195	8	Surface	Chromium	6.79E+01			1.26E-07		1.26E-07	13%
9	195	8	Surface	Cobalt	1.82E+01			3.62E-09		3.62E-09	0%
9	195	8	Surface	Nickel	7.01E+01			4.03E-10		4.03E-10	0%
9	195	8	Surface	Total PAH	2.16E-01	1.54E-08	1.88E-07	3.12E-10		2.04E-07	21%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	195	8	Surface	Vanadium	4.04E+01					0.00E+00	0%
9	**195**	**8**	**Surface**	**Totals**		**1.85E-07**	**6.67E-07**	**1.32E-07**		**9.83E-07**	
9	**195**	**8**	**Surface**	**Percent**		**19%**	**68%**	**13%**			
9	195	9	Surface	Chromium	6.08E+01			1.13E-07		1.13E-07	100%
9	195	9	Surface	Nickel	7.93E+01			4.55E-10		4.55E-10	0%
9	**195**	**9**	**Surface**	**Totals**				**1.13E-07**		**1.13E-07**	
9	**195**	**9**	**Surface**	**Percent**				**100%**			
9	195	10	Surface	Chromium	4.51E+01			8.36E-08		8.36E-08	99%
9	195	10	Surface	Nickel	7.40E+01			4.25E-10		4.25E-10	1%
9	195	10	Surface	Silver	1.31E+01					0.00E+00	0%
9	**195**	**10**	**Surface**	**Totals**				**8.41E-08**		**8.41E-08**	
9	**195**	**10**	**Surface**	**Percent**				**100%**			
9	195	11	Surface	Aluminum	2.81E+04					0.00E+00	0%
9	195	11	Surface	Arsenic	1.35E+01	1.98E-07	5.57E-07	1.28E-09		7.56E-07	88%
9	195	11	Surface	Barium	4.53E+02					0.00E+00	0%
9	195	11	Surface	Chromium	5.05E+01			9.37E-08		9.37E-08	11%
9	195	11	Surface	Cobalt	2.77E+01			5.51E-09		5.51E-09	1%
9	195	11	Surface	Iron	1.97E+04					0.00E+00	0%
9	195	11	Surface	Nickel	6.77E+01			3.89E-10		3.89E-10	0%
9	195	11	Surface	Thallium	6.60E-01					0.00E+00	0%
9	195	11	Surface	Vanadium	7.97E+01					0.00E+00	0%
9	**195**	**11**	**Surface**	**Totals**		**1.98E-07**	**5.57E-07**	**1.01E-07**		**8.56E-07**	
9	**195**	**11**	**Surface**	**Percent**		**23%**	**65%**	**12%**			
9	195	12	Surface	Beryllium	7.50E-01			3.98E-11		3.98E-11	0%
9	195	12	Surface	Chromium	7.04E+01			1.31E-07		1.31E-07	100%
9	195	12	Surface	Nickel	6.78E+01			3.89E-10		3.89E-10	0%
9	**195**	**12**	**Surface**	**Totals**				**1.31E-07**		**1.31E-07**	
9	**195**	**12**	**Surface**	**Percent**				**100%**			
9	195	13	Surface	Chromium	6.55E+01			1.22E-07		1.22E-07	100%
9	195	13	Surface	Nickel	6.91E+01			3.97E-10		3.97E-10	0%
9	**195**	**13**	**Surface**	**Totals**				**1.22E-07**		**1.22E-07**	
9	**195**	**13**	**Surface**	**Percent**				**100%**			
9	195	14	Surface	Chromium	5.94E+01			1.10E-07		1.10E-07	100%
9	195	14	Surface	Nickel	7.04E+01			4.04E-10		4.04E-10	0%
9	**195**	**14**	**Surface**	**Totals**				**1.11E-07**		**1.11E-07**	
9	**195**	**14**	**Surface**	**Percent**				**100%**			
9	195	15	Surface	Chromium	4.82E+01			8.94E-08		8.94E-08	100%
9	**195**	**15**	**Surface**	**Totals**				**8.94E-08**		**8.94E-08**	
9	**195**	**15**	**Surface**	**Percent**				**100%**			
9	195	16	Surface	Chromium	4.45E+01			8.25E-08		8.25E-08	99%
9	195	16	Surface	Nickel	8.16E+01			4.69E-10		4.69E-10	1%
9	**195**	**16**	**Surface**	**Totals**				**8.30E-08**		**8.30E-08**	
9	**195**	**16**	**Surface**	**Percent**				**100%**			
9	195	17	Surface	Chromium	8.22E+01			1.53E-07		1.53E-07	20%
9	195	17	Surface	Mercury	4.17E-01					0.00E+00	0%
9	195	17	Surface	Nickel	5.93E+01			3.41E-10		3.41E-10	0%
9	195	17	Surface	PCB, Total	7.40E-01	1.45E-08	1.91E-07	1.58E-08		2.21E-07	29%
9	195	17	Surface	Silver	1.01E+01					0.00E+00	0%
9	195	17	Surface	Thallium	5.40E-01					0.00E+00	0%
9	195	17	Surface	Total PAH	3.16E-01	2.26E-08	2.76E-07	4.57E-10		2.99E-07	39%
9	195	17	Surface	Uranium-235	1.32E-01	3.77E-10		1.51E-11	1.83E-08	1.87E-08	2%
9	195	17	Surface	Uranium-238	2.48E+00	9.11E-09		2.62E-10	7.23E-08	8.17E-08	11%
9	**195**	**17**	**Surface**	**Totals**		**4.65E-08**	**4.66E-07**	**1.69E-07**	**9.06E-08**	**7.73E-07**	
9	**195**	**17**	**Surface**	**Percent**		**6%**	**60%**	**22%**	**12%**		
9	486	1	Surface	Cesium-137	1.71E+00	1.30E-09		2.30E-13	1.11E-06	1.11E-06	100%
9	**486**	**1**	**Surface**	**Totals**		**1.30E-09**		**2.30E-13**	**1.11E-06**	**1.11E-06**	
9	**486**	**1**	**Surface**	**Percent**		**0%**		**0%**	**100%**		
9	487	1	Surface	Cesium-137	1.38E+00	1.05E-09		1.85E-13	8.96E-07	8.97E-07	100%
9	**487**	**1**	**Surface**	**Totals**		**1.05E-09**		**1.85E-13**	**8.96E-07**	**8.97E-07**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**487**	**1**	**Surface**	**Percent**		**0%**		**0%**	**100%**		
9	492	1	Surface	Arsenic	1.47E+01	2.16E-07	6.08E-07	1.40E-09		8.26E-07	3%
9	492	1	Surface	Beryllium	1.04E+01			5.51E-10		5.51E-10	0%
9	492	1	Surface	Cadmium	3.14E+00			1.25E-10		1.25E-10	0%
9	492	1	Surface	Chromium	1.04E+03			1.93E-06		1.93E-06	7%
9	492	1	Surface	Cobalt-60	9.63E-03	6.79E-12		3.89E-15	3.05E-08	3.05E-08	0%
9	492	1	Surface	Neptunium-237	2.09E-01	5.93E-10		4.18E-11	4.25E-08	4.32E-08	0%
9	492	1	Surface	PCB, Total	4.41E+01	8.63E-07	1.14E-05	9.39E-07		1.32E-05	44%
9	492	1	Surface	Uranium	1.77E+03					0.00E+00	0%
9	492	1	Surface	Uranium-234	5.39E+01	1.49E-07		6.94E-09	3.47E-09	1.59E-07	1%
9	492	1	Surface	Uranium-235	5.72E+00	1.63E-08		6.52E-10	7.94E-07	8.11E-07	3%
9	492	1	Surface	Uranium-238	3.83E+02	1.41E-06		4.04E-08	1.12E-05	1.26E-05	43%
9	492	1	Surface	Vanadium	4.32E+01					0.00E+00	0%
9	**492**	**1**	**Surface**	**Totals**		**2.65E-06**	**1.20E-05**	**2.92E-06**	**1.20E-05**	**2.96E-05**	
9	**492**	**1**	**Surface**	**Percent**		**9%**	**40%**	**10%**	**41%**		
9	493	1	Surface	Aluminum	1.44E+04					0.00E+00	0%
9	493	1	Surface	Barium	4.04E+02					0.00E+00	0%
9	493	1	Surface	Beryllium	9.91E-01			5.25E-11		5.25E-11	0%
9	493	1	Surface	Chromium	6.61E+01			1.23E-07		1.23E-07	13%
9	493	1	Surface	Cobalt	3.79E+01			7.54E-09		7.54E-09	1%
9	493	1	Surface	Cobalt-60	1.36E-02	9.59E-12		5.50E-15	4.31E-08	4.31E-08	5%
9	493	1	Surface	Manganese	3.55E+03					0.00E+00	0%
9	493	1	Surface	Mercury	2.60E-01					0.00E+00	0%
9	493	1	Surface	Neptunium-237	1.22E-01	3.46E-10		2.44E-11	2.48E-08	2.52E-08	3%
9	493	1	Surface	Nickel	2.13E+02			1.22E-09		1.22E-09	0%
9	493	1	Surface	PCB, Total	2.60E-01	5.09E-09	6.70E-08	5.53E-09		7.76E-08	8%
9	493	1	Surface	Total PAH	5.00E-01	3.57E-08	4.36E-07	7.23E-10		4.73E-07	50%
9	493	1	Surface	Uranium-235	1.65E-01	4.71E-10		1.88E-11	2.29E-08	2.34E-08	2%
9	493	1	Surface	Uranium-238	5.50E+00	2.02E-08		5.81E-10	1.60E-07	1.81E-07	19%
9	493	1	Surface	Vanadium	4.05E+01					0.00E+00	0%
9	**493**	**1**	**Surface**	**Totals**		**6.18E-08**	**5.03E-07**	**1.38E-07**	**2.51E-07**	**9.55E-07**	
9	**493**	**1**	**Surface**	**Percent**		**6%**	**53%**	**14%**	**26%**		
9	517	1	Surface	Beryllium	7.39E-01			3.92E-11		3.92E-11	0%
9	517	1	Surface	Chromium	4.91E+01			9.11E-08		9.11E-08	14%
9	517	1	Surface	Cobalt-60	6.39E-03	4.51E-12		2.58E-15	2.03E-08	2.03E-08	3%
9	517	1	Surface	Neptunium-237	1.07E+00	3.03E-09		2.14E-10	2.18E-07	2.21E-07	35%
9	517	1	Surface	Nickel	1.72E+02			9.88E-10		9.88E-10	0%
9	517	1	Surface	PCB, Total	5.00E-01	9.78E-09	1.29E-07	1.06E-08		1.49E-07	24%
9	517	1	Surface	Uranium-235	1.60E-01	4.56E-10		1.82E-11	2.22E-08	2.27E-08	4%
9	517	1	Surface	Uranium-238	3.89E+00	1.43E-08		4.11E-10	1.13E-07	1.28E-07	20%
9	**517**	**1**	**Surface**	**Totals**		**2.76E-08**	**1.29E-07**	**1.03E-07**	**3.74E-07**	**6.33E-07**	
9	**517**	**1**	**Surface**	**Percent**		**4%**	**20%**	**16%**	**59%**		
9	541	1	Surface	Aluminum	1.43E+04					0.00E+00	0%
9	541	1	Surface	Americium-241	7.53E+00	2.86E-08		2.39E-09	5.32E-08	8.41E-08	0%
9	541	1	Surface	Barium	1.28E+02					0.00E+00	0%
9	541	1	Surface	Beryllium	6.98E-01			3.70E-11		3.70E-11	0%
9	541	1	Surface	Cadmium	1.68E+00			6.69E-11		6.69E-11	0%
9	541	1	Surface	Cesium-137	9.58E-01	7.26E-10		1.29E-13	6.22E-07	6.23E-07	1%
9	541	1	Surface	Chromium	8.24E+02			1.53E-06		1.53E-06	3%
9	541	1	Surface	Cobalt-60	1.01E-02	7.12E-12		4.08E-15	3.20E-08	3.20E-08	0%
9	541	1	Surface	Iron	1.60E+04					0.00E+00	0%
9	541	1	Surface	Mercury	9.81E-02					0.00E+00	0%
9	541	1	Surface	Naphthalene	6.55E-01			1.64E-08		1.64E-08	0%
9	541	1	Surface	Neptunium-237	5.52E-02	1.56E-10		1.10E-11	1.12E-08	1.14E-08	0%
9	541	1	Surface	Nickel	1.52E+01			8.75E-11		8.75E-11	0%
9	541	1	Surface	PCB, Total	6.06E+01	1.19E-06	1.56E-05	1.29E-06		1.81E-05	31%
9	541	1	Surface	Total PAH	2.33E+00	1.66E-07	2.03E-06	3.37E-09		2.20E-06	4%
9	541	1	Surface	Uranium	6.38E+03					0.00E+00	0%
9	541	1	Surface	Uranium-234	1.43E+02	3.95E-07		1.84E-08	9.21E-09	4.23E-07	1%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	541	1	Surface	Uranium-235	1.76E+01	5.01E-08		2.00E-09	2.44E-06	2.49E-06	4%
9	541	1	Surface	Uranium-238	1.00E+03	3.68E-06		1.06E-07	2.92E-05	3.30E-05	56%
9	541	1	Surface	Vanadium	3.04E+01					0.00E+00	0%
9	**541**	**1**	**Surface**	**Totals**		**5.51E-06**	**1.76E-05**	**2.97E-06**	**3.23E-05**	**5.85E-05**	
9	**541**	**1**	**Surface**	**Percent**		**9%**	**30%**	**5%**	**55%**		
9	561	1	Surface	Antimony	9.36E-01					0.00E+00	0%
9	561	1	Surface	Arsenic	1.66E+01	2.43E-07	6.85E-07	1.58E-09		9.29E-07	16%
9	561	1	Surface	Barium	1.40E+02					0.00E+00	0%
9	561	1	Surface	Beryllium	6.85E-01			3.63E-11		3.63E-11	0%
9	561	1	Surface	Chromium	8.58E+01			1.59E-07		1.59E-07	3%
9	561	1	Surface	Cobalt	1.07E+01			2.13E-09		2.13E-09	0%
9	561	1	Surface	Cobalt-60	7.06E-02	4.98E-11		2.85E-14	2.24E-07	2.24E-07	4%
9	561	1	Surface	Iron	2.05E+04					0.00E+00	0%
9	561	1	Surface	Manganese	1.61E+03					0.00E+00	0%
9	561	1	Surface	Neptunium-237	2.71E-02	7.68E-11		5.42E-12	5.52E-09	5.60E-09	0%
9	561	1	Surface	PCB, Total	1.04E+00	2.04E-08	2.68E-07	2.22E-08		3.11E-07	5%
9	561	1	Surface	Thallium	3.33E-01					0.00E+00	0%
9	561	1	Surface	Total PAH	3.94E-01	2.81E-08	3.44E-07	5.70E-10		3.73E-07	7%
9	561	1	Surface	Uranium	2.65E+02					0.00E+00	0%
9	561	1	Surface	Uranium-234	7.84E+00	2.17E-08		1.01E-09	5.05E-10	2.32E-08	0%
9	561	1	Surface	Uranium-235	1.37E+00	3.90E-09		1.56E-10	1.90E-07	1.94E-07	3%
9	561	1	Surface	Uranium-238	1.07E+02	3.91E-07		1.12E-08	3.10E-06	3.51E-06	61%
9	561	1	Surface	Vanadium	3.76E+01					0.00E+00	0%
9	**561**	**1**	**Surface**	**Totals**		**7.09E-07**	**1.30E-06**	**1.98E-07**	**3.52E-06**	**5.73E-06**	
9	**561**	**1**	**Surface**	**Percent**		**12%**	**23%**	**3%**	**62%**		
9	561	2	Surface	Antimony	5.33E+00					0.00E+00	0%
9	561	2	Surface	Arsenic	1.30E+01	1.91E-07	5.38E-07	1.24E-09		7.31E-07	3%
9	561	2	Surface	Beryllium	6.34E-01			3.36E-11		3.36E-11	0%
9	561	2	Surface	Cadmium	4.13E-01			1.64E-11		1.64E-11	0%
9	561	2	Surface	Cesium-137	4.09E-01	3.10E-10		5.50E-14	2.66E-07	2.66E-07	1%
9	561	2	Surface	Chromium	2.88E+02			5.35E-07		5.35E-07	2%
9	561	2	Surface	Cobalt	1.14E+01			2.27E-09		2.27E-09	0%
9	561	2	Surface	Cobalt-60	2.76E-02	1.95E-11		1.12E-14	8.75E-08	8.75E-08	0%
9	561	2	Surface	Manganese	1.12E+03					0.00E+00	0%
9	561	2	Surface	Neptunium-237	4.71E-02	1.34E-10		9.41E-12	9.59E-09	9.73E-09	0%
9	561	2	Surface	PCB, Total	1.64E+01	3.21E-07	4.23E-06	3.49E-07		4.90E-06	21%
9	561	2	Surface	Thallium	4.09E-01					0.00E+00	0%
9	561	2	Surface	Total PAH	2.43E+00	1.74E-07	2.12E-06	3.52E-09		2.30E-06	10%
9	561	2	Surface	Uranium	1.38E+03					0.00E+00	0%
9	561	2	Surface	Uranium-234	4.06E+01	1.12E-07		5.23E-09	2.62E-09	1.20E-07	1%
9	561	2	Surface	Uranium-235	7.09E+00	2.02E-08		8.09E-10	9.85E-07	1.01E-06	4%
9	561	2	Surface	Uranium-238	4.00E+02	1.47E-06		4.23E-08	1.17E-05	1.32E-05	57%
9	561	2	Surface	Vanadium	3.46E+01					0.00E+00	0%
9	**561**	**2**	**Surface**	**Totals**		**2.29E-06**	**6.89E-06**	**9.40E-07**	**1.30E-05**	**2.31E-05**	
9	**561**	**2**	**Surface**	**Percent**		**10%**	**30%**	**4%**	**56%**		
9	562	1	Surface	Uranium	8.73E+01					0.00E+00	0%
9	562	1	Surface	Uranium-238	2.73E+00	1.00E-08		2.88E-10	7.96E-08	8.99E-08	100%
9	**562**	**1**	**Surface**	**Totals**		**1.00E-08**		**2.88E-10**	**7.96E-08**	**8.99E-08**	
9	**562**	**1**	**Surface**	**Percent**		**11%**		**0%**	**89%**		
9	562	2	Surface	PCB, Total	1.58E+00	3.09E-08	4.07E-07	3.36E-08		4.71E-07	2%
9	562	2	Surface	Uranium-234	5.34E+01	1.48E-07		6.87E-09	3.44E-09	1.58E-07	1%
9	562	2	Surface	Uranium-235	8.96E+00	2.56E-08		1.02E-09	1.24E-06	1.27E-06	6%
9	562	2	Surface	Uranium-238	5.81E+02	2.14E-06		6.13E-08	1.69E-05	1.91E-05	91%
9	**562**	**2**	**Surface**	**Totals**		**2.34E-06**	**4.07E-07**	**1.03E-07**	**1.82E-05**	**2.10E-05**	
9	**562**	**2**	**Surface**	**Percent**		**11%**	**2%**	**0%**	**86%**		
9	562	3	Surface	Chromium	3.82E+01			7.08E-08		7.08E-08	10%
9	562	3	Surface	PCB, Total	2.40E-01	4.70E-09	6.18E-08	5.11E-09		7.16E-08	10%
9	562	3	Surface	Total PAH	2.20E-01	1.57E-08	1.92E-07	3.18E-10		2.08E-07	28%
9	562	3	Surface	Uranium	5.89E+01					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	562	3	Surface	Uranium-235	1.63E-01	4.65E-10		1.86E-11	2.26E-08	2.31E-08	3%
9	562	3	Surface	Uranium-238	1.09E+01	4.01E-08		1.15E-09	3.18E-07	3.59E-07	49%
9	**562**	**3**	**Surface**	**Totals**		**6.09E-08**	**2.54E-07**	**7.74E-08**	**3.40E-07**	**7.33E-07**	
9	**562**	**3**	**Surface**	**Percent**		**8%**	**35%**	**11%**	**46%**		
9	562	4	Surface	Chromium	4.67E+01			8.66E-08		8.66E-08	54%
9	562	4	Surface	Uranium	2.10E+01					0.00E+00	0%
9	562	4	Surface	Uranium-238	2.24E+00	8.23E-09		2.36E-10	6.53E-08	7.38E-08	46%
9	**562**	**4**	**Surface**	**Totals**		**8.23E-09**		**8.68E-08**	**6.53E-08**	**1.60E-07**	
9	**562**	**4**	**Surface**	**Percent**		**5%**		**54%**	**41%**		
9	562	5	Surface	Chromium	1.53E+02			2.84E-07		2.84E-07	10%
9	562	5	Surface	PCB, Total	9.50E-01	1.86E-08	2.45E-07	2.02E-08		2.83E-07	10%
9	562	5	Surface	Total PAH	7.05E-02	5.04E-09	6.15E-08	1.02E-10		6.67E-08	2%
9	562	5	Surface	Uranium	2.08E+02					0.00E+00	0%
9	562	5	Surface	Uranium-234	8.57E+00	2.37E-08		1.10E-09	5.52E-10	2.54E-08	1%
9	562	5	Surface	Uranium-235	9.50E-01	2.71E-09		1.08E-10	1.32E-07	1.35E-07	5%
9	562	5	Surface	Uranium-238	6.24E+01	2.29E-07		6.59E-09	1.82E-06	2.05E-06	72%
9	**562**	**5**	**Surface**	**Totals**		**2.79E-07**	**3.06E-07**	**3.12E-07**	**1.95E-06**	**2.85E-06**	
9	**562**	**5**	**Surface**	**Percent**		**10%**	**11%**	**11%**	**68%**		
9	562	6	Surface	Uranium-234	4.01E+01	1.11E-07		5.16E-09	2.58E-09	1.19E-07	1%
9	562	6	Surface	Uranium-235	6.81E+00	1.94E-08		7.77E-10	9.46E-07	9.66E-07	7%
9	562	6	Surface	Uranium-238	3.62E+02	1.33E-06		3.82E-08	1.05E-05	1.19E-05	92%
9	**562**	**6**	**Surface**	**Totals**		**1.46E-06**		**4.41E-08**	**1.15E-05**	**1.30E-05**	
9	**562**	**6**	**Surface**	**Percent**		**11%**		**0%**	**88%**		
9	563	1	Surface	Cadmium	8.96E-01			3.56E-11		3.56E-11	0%
9	563	1	Surface	Chromium	2.85E+02			5.29E-07		5.29E-07	63%
9	563	1	Surface	PCB, Total	7.40E-01	1.45E-08	1.91E-07	1.58E-08		2.21E-07	26%
9	563	1	Surface	Uranium	1.51E+01					0.00E+00	0%
9	563	1	Surface	Uranium-238	2.76E+00	1.01E-08		2.91E-10	8.05E-08	9.09E-08	11%
9	**563**	**1**	**Surface**	**Totals**		**2.46E-08**	**1.91E-07**	**5.45E-07**	**8.05E-08**	**8.41E-07**	
9	**563**	**1**	**Surface**	**Percent**		**3%**	**23%**	**65%**	**10%**		
9	563	2	Surface	Cesium-137	6.47E-01	4.90E-10		8.69E-14	4.20E-07	4.21E-07	90%
9	563	2	Surface	Uranium-238	1.49E+00	5.48E-09		1.57E-10	4.34E-08	4.91E-08	10%
9	**563**	**2**	**Surface**	**Totals**		**5.97E-09**		**1.57E-10**	**4.64E-07**	**4.70E-07**	
9	**563**	**2**	**Surface**	**Percent**		**1%**		**0%**	**99%**		
9	564	1	Surface	Arsenic	4.30E+01	6.31E-07	1.78E-06	4.10E-09		2.41E-06	62%
9	564	1	Surface	Beryllium	2.12E+00			1.12E-10		1.12E-10	0%
9	564	1	Surface	Cadmium	1.96E+00			7.79E-11		7.79E-11	0%
9	564	1	Surface	Cesium-137	6.20E-01	4.70E-10		8.33E-14	4.03E-07	4.03E-07	10%
9	564	1	Surface	Chromium	7.49E+01			1.39E-07		1.39E-07	4%
9	564	1	Surface	Iron	3.66E+04					0.00E+00	0%
9	564	1	Surface	Mercury	2.30E-01					0.00E+00	0%
9	564	1	Surface	Nickel	2.24E+01			1.29E-10		1.29E-10	0%
9	564	1	Surface	PCB, Total	1.93E+00	3.78E-08	4.97E-07	4.11E-08		5.76E-07	15%
9	564	1	Surface	Thallium	2.36E+00					0.00E+00	0%
9	564	1	Surface	Thorium-230	5.01E+00	1.77E-08		1.61E-09	1.05E-09	2.04E-08	1%
9	564	1	Surface	Uranium	5.83E+01					0.00E+00	0%
9	564	1	Surface	Uranium-234	6.93E+00	1.92E-08		8.92E-10	4.47E-10	2.05E-08	1%
9	564	1	Surface	Uranium-235	3.87E-01	1.10E-09		4.41E-11	5.37E-08	5.49E-08	1%
9	564	1	Surface	Uranium-238	8.33E+00	3.06E-08		8.79E-10	2.43E-07	2.74E-07	7%
9	564	1	Surface	Vanadium	8.06E+01					0.00E+00	0%
9	**564**	**1**	**Surface**	**Totals**		**7.38E-07**	**2.28E-06**	**1.88E-07**	**7.01E-07**	**3.90E-06**	
9	**564**	**1**	**Surface**	**Percent**		**19%**	**58%**	**5%**	**18%**		
9	567	3	Surface	Chromium	3.79E+01			7.03E-08		7.03E-08	100%
9	**567**	**3**	**Surface**	**Totals**				**7.03E-08**		**7.03E-08**	
9	**567**	**3**	**Surface**	**Percent**				**100%**			
9	567	4	Surface	Aluminum	1.25E+04					0.00E+00	0%
9	567	4	Surface	Chromium	1.63E+01			3.03E-08		3.03E-08	47%
9	567	4	Surface	Uranium-238	1.05E+00	3.86E-09		1.11E-10	3.06E-08	3.45E-08	53%
9	**567**	**4**	**Surface**	**Totals**		**3.86E-09**		**3.04E-08**	**3.06E-08**	**6.48E-08**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**567**	**4**	**Surface**	**Percent**		**6%**		**47%**	**47%**		
10	14	1	Surface	Americium-241	1.27E+00	4.81E-09		4.02E-10	8.94E-09	1.42E-08	1%
10	14	1	Surface	Arsenic	1.10E+01	1.61E-07	4.54E-07	1.05E-09		6.17E-07	58%
10	14	1	Surface	Chromium	6.36E+01			1.18E-07		1.18E-07	11%
10	14	1	Surface	Iron	1.89E+04					0.00E+00	0%
10	14	1	Surface	Neptunium-237	2.14E-01	6.07E-10		4.28E-11	4.36E-08	4.42E-08	4%
10	14	1	Surface	Nickel	1.40E+02			8.03E-10		8.03E-10	0%
10	14	1	Surface	PCB, Total	5.00E-01	9.78E-09	1.29E-07	1.06E-08		1.49E-07	14%
10	14	1	Surface	Silver	1.67E+01					0.00E+00	0%
10	14	1	Surface	Technetium-99	4.06E+02	5.44E-08		6.46E-11	8.45E-09	6.29E-08	6%
10	14	1	Surface	Uranium	7.21E+01					0.00E+00	0%
10	14	1	Surface	Uranium-238	1.69E+00	6.21E-09		1.78E-10	4.93E-08	5.57E-08	5%
10	**14**	**1**	**Surface**	**Totals**		**2.37E-07**	**5.83E-07**	**1.31E-07**	**1.10E-07**	**1.06E-06**	
10	**14**	**1**	**Surface**	**Percent**		**22%**	**55%**	**12%**	**10%**		
10	14	2	Surface	Antimony	3.70E+00					0.00E+00	0%
10	14	2	Surface	Arsenic	1.45E+01	2.13E-07	6.01E-07	1.39E-09		8.16E-07	22%
10	14	2	Surface	Beryllium	7.10E-01			3.76E-11		3.76E-11	0%
10	14	2	Surface	Chromium	6.65E+01			1.23E-07		1.23E-07	3%
10	14	2	Surface	Copper	1.76E+02					0.00E+00	0%
10	14	2	Surface	Iron	3.72E+04					0.00E+00	0%
10	14	2	Surface	Manganese	1.44E+03					0.00E+00	0%
10	14	2	Surface	Mercury	2.67E-01					0.00E+00	0%
10	14	2	Surface	Neptunium-237	7.70E-01	2.18E-09		1.54E-10	1.57E-07	1.59E-07	4%
10	14	2	Surface	Nickel	6.78E+02			3.89E-09		3.89E-09	0%
10	14	2	Surface	PCB, Total	3.90E-01	7.63E-09	1.00E-07	8.30E-09		1.16E-07	3%
10	14	2	Surface	Thorium-230	5.98E+00	2.11E-08		1.92E-09	1.25E-09	2.43E-08	1%
10	14	2	Surface	Total PAH	3.38E-01	2.42E-08	2.95E-07	4.89E-10		3.20E-07	8%
10	14	2	Surface	Uranium	2.93E+02					0.00E+00	0%
10	14	2	Surface	Uranium-234	3.24E+01	8.96E-08		4.17E-09	2.09E-09	9.58E-08	3%
10	14	2	Surface	Uranium-235	2.00E+00	5.71E-09		2.28E-10	2.78E-07	2.84E-07	7%
10	14	2	Surface	Uranium-238	5.61E+01	2.06E-07		5.92E-09	1.64E-06	1.85E-06	49%
10	**14**	**2**	**Surface**	**Totals**		**5.70E-07**	**9.97E-07**	**1.50E-07**	**2.07E-06**	**3.79E-06**	
10	**14**	**2**	**Surface**	**Percent**		**15%**	**26%**	**4%**	**55%**		
10	14	3	Surface	Arsenic	1.30E+01	1.90E-07	5.37E-07	1.24E-09		7.28E-07	21%
10	14	3	Surface	Chromium	7.01E+01			1.30E-07		1.30E-07	4%
10	14	3	Surface	Copper	1.29E+02					0.00E+00	0%
10	14	3	Surface	Iron	3.48E+04					0.00E+00	0%
10	14	3	Surface	Manganese	1.06E+03					0.00E+00	0%
10	14	3	Surface	Mercury	7.48E+00					0.00E+00	0%
10	14	3	Surface	Molybdenum	2.21E+01					0.00E+00	0%
10	14	3	Surface	Nickel	5.76E+02			3.31E-09		3.31E-09	0%
10	14	3	Surface	PCB, Total	8.65E+00	1.69E-07	2.23E-06	1.84E-07		2.58E-06	74%
10	14	3	Surface	Uranium	2.18E+02					0.00E+00	0%
10	14	3	Surface	Uranium-238	1.50E+00	5.51E-09		1.58E-10	4.37E-08	4.94E-08	1%
10	**14**	**3**	**Surface**	**Totals**		**3.65E-07**	**2.76E-06**	**3.19E-07**	**4.37E-08**	**3.49E-06**	
10	**14**	**3**	**Surface**	**Percent**		**10%**	**79%**	**9%**	**1%**		
10	14	4	Surface	Antimony	4.30E+00					0.00E+00	0%
10	14	4	Surface	Arsenic	1.33E+01	1.95E-07	5.50E-07	1.27E-09		7.46E-07	7%
10	14	4	Surface	Chromium	7.20E+01			1.34E-07		1.34E-07	1%
10	14	4	Surface	Copper	3.54E+02					0.00E+00	0%
10	14	4	Surface	Iron	3.88E+04					0.00E+00	0%
10	14	4	Surface	Mercury	4.87E-01					0.00E+00	0%
10	14	4	Surface	Neptunium-237	2.68E+00	7.60E-09		5.36E-10	5.45E-07	5.54E-07	5%
10	14	4	Surface	Nickel	7.31E+02			4.20E-09		4.20E-09	0%
10	14	4	Surface	PCB, Total	6.61E+00	1.29E-07	1.70E-06	1.41E-07		1.97E-06	18%
10	14	4	Surface	Silver	1.17E+01					0.00E+00	0%
10	14	4	Surface	Thorium-230	8.33E+00	2.94E-08		2.68E-09	1.74E-09	3.39E-08	0%
10	14	4	Surface	Total PAH	2.51E-01	1.79E-08	2.19E-07	3.63E-10		2.37E-07	2%
10	14	4	Surface	Uranium	3.72E+02					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	4	Surface	Uranium-234	1.13E+02	3.12E-07		1.45E-08	7.28E-09	3.34E-07	3%
10	14	4	Surface	Uranium-235	8.00E+00	2.28E-08		9.12E-10	1.11E-06	1.13E-06	11%
10	14	4	Surface	Uranium-238	1.69E+02	6.21E-07		1.78E-08	4.93E-06	5.57E-06	52%
10	**14**	**4**	**Surface**	**Totals**		**1.34E-06**	**2.47E-06**	**3.17E-07**	**6.59E-06**	**1.07E-05**	
10	**14**	**4**	**Surface**	**Percent**		**12%**	**23%**	**3%**	**62%**		
10	14	5	Surface	Antimony	2.30E+00					0.00E+00	0%
10	14	5	Surface	Arsenic	1.31E+01	1.92E-07	5.41E-07	1.25E-09		7.35E-07	14%
10	14	5	Surface	Cadmium	3.90E+00			1.55E-10		1.55E-10	0%
10	14	5	Surface	Chromium	4.70E+01			8.72E-08		8.72E-08	2%
10	14	5	Surface	Cobalt	1.40E+01			2.78E-09		2.78E-09	0%
10	14	5	Surface	Copper	1.34E+02					0.00E+00	0%
10	14	5	Surface	Iron	3.92E+04					0.00E+00	0%
10	14	5	Surface	Manganese	8.28E+02					0.00E+00	0%
10	14	5	Surface	Mercury	1.09E+01					0.00E+00	0%
10	14	5	Surface	Neptunium-237	1.74E+00	4.93E-09		3.48E-10	3.54E-07	3.59E-07	7%
10	14	5	Surface	Nickel	4.61E+02			2.65E-09		2.65E-09	0%
10	14	5	Surface	PCB, Total	1.00E+00	1.96E-08	2.58E-07	2.13E-08		2.98E-07	6%
10	14	5	Surface	Silver	1.29E+01					0.00E+00	0%
10	14	5	Surface	Technetium-99	1.01E+02	1.35E-08		1.61E-11	2.10E-09	1.57E-08	0%
10	14	5	Surface	Thallium	4.10E-01					0.00E+00	0%
10	14	5	Surface	Thorium-230	1.39E+01	4.91E-08		4.47E-09	2.91E-09	5.65E-08	1%
10	14	5	Surface	Total PAH	1.21E-01	8.64E-09	1.06E-07	1.75E-10		1.14E-07	2%
10	14	5	Surface	Uranium	2.62E+02					0.00E+00	0%
10	14	5	Surface	Uranium-234	5.22E+01	1.44E-07		6.72E-09	3.36E-09	1.54E-07	3%
10	14	5	Surface	Uranium-235	3.33E+00	9.50E-09		3.80E-10	4.62E-07	4.72E-07	9%
10	14	5	Surface	Uranium-238	9.42E+01	3.46E-07		9.94E-09	2.75E-06	3.10E-06	57%
10	**14**	**5**	**Surface**	**Totals**		**7.88E-07**	**9.04E-07**	**1.37E-07**	**3.57E-06**	**5.40E-06**	
10	**14**	**5**	**Surface**	**Percent**		**15%**	**17%**	**3%**	**66%**		
10	14	6	Surface	Antimony	2.70E+00					0.00E+00	0%
10	14	6	Surface	Cadmium	8.40E-01			3.34E-11		3.34E-11	0%
10	14	6	Surface	Chromium	4.46E+02			8.28E-07		8.28E-07	17%
10	14	6	Surface	Copper	1.22E+02					0.00E+00	0%
10	14	6	Surface	Mercury	3.47E-01					0.00E+00	0%
10	14	6	Surface	Neptunium-237	2.65E+00	7.51E-09		5.30E-10	5.39E-07	5.47E-07	11%
10	14	6	Surface	Nickel	9.63E+02			5.53E-09		5.53E-09	0%
10	14	6	Surface	PCB, Total	5.00E+00	9.78E-08	1.29E-06	1.06E-07		1.49E-06	30%
10	14	6	Surface	Silver	1.19E+01					0.00E+00	0%
10	14	6	Surface	Uranium	5.79E+02					0.00E+00	0%
10	14	6	Surface	Uranium-234	3.41E+01	9.43E-08		4.39E-09	2.20E-09	1.01E-07	2%
10	14	6	Surface	Uranium-235	2.27E+00	6.48E-09		2.59E-10	3.15E-07	3.22E-07	6%
10	14	6	Surface	Uranium-238	5.08E+01	1.87E-07		5.36E-09	1.48E-06	1.67E-06	34%
10	**14**	**6**	**Surface**	**Totals**		**3.93E-07**	**1.29E-06**	**9.50E-07**	**2.34E-06**	**4.97E-06**	
10	**14**	**6**	**Surface**	**Percent**		**8%**	**26%**	**19%**	**47%**		
10	14	7	Surface	Antimony	7.50E-01					0.00E+00	0%
10	14	7	Surface	Arsenic	1.13E+01	1.66E-07	4.68E-07	1.08E-09		6.35E-07	15%
10	14	7	Surface	Cadmium	2.70E+00			1.07E-10		1.07E-10	0%
10	14	7	Surface	Chromium	6.46E+01			1.20E-07		1.20E-07	3%
10	14	7	Surface	Mercury	7.82E+00					0.00E+00	0%
10	14	7	Surface	Neptunium-237	1.49E+00	4.22E-09		2.98E-10	3.03E-07	3.08E-07	7%
10	14	7	Surface	Nickel	1.22E+03			7.03E-09		7.03E-09	0%
10	14	7	Surface	PCB, Total	7.60E+00	1.49E-07	1.96E-06	1.62E-07		2.27E-06	53%
10	14	7	Surface	Total PAH	6.31E-02	4.51E-09	5.51E-08	9.14E-11		5.97E-08	1%
10	14	7	Surface	Uranium	3.33E+02					0.00E+00	0%
10	14	7	Surface	Uranium-234	1.28E+01	3.54E-08		1.65E-09	8.25E-10	3.79E-08	1%
10	14	7	Surface	Uranium-235	9.60E-01	2.74E-09		1.09E-10	1.33E-07	1.36E-07	3%
10	14	7	Surface	Uranium-238	2.13E+01	7.83E-08		2.25E-09	6.21E-07	7.01E-07	16%
10	**14**	**7**	**Surface**	**Totals**		**4.40E-07**	**2.48E-06**	**2.94E-07**	**1.06E-06**	**4.27E-06**	
10	**14**	**7**	**Surface**	**Percent**		**10%**	**58%**	**7%**	**25%**		
10	14	8	Surface	Antimony	6.10E-01					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	8	Surface	Arsenic	1.14E+01	1.67E-07	4.71E-07	1.08E-09		6.39E-07	24%
10	14	8	Surface	Chromium	4.60E+01			8.54E-08		8.54E-08	3%
10	14	8	Surface	Mercury	7.90E+00					0.00E+00	0%
10	14	8	Surface	Neptunium-237	8.80E-01	2.49E-09		1.76E-10	1.79E-07	1.82E-07	7%
10	14	8	Surface	Nickel	6.73E+02			3.86E-09		3.86E-09	0%
10	14	8	Surface	PCB, Total	5.00E+00	9.78E-08	1.29E-06	1.06E-07		1.49E-06	55%
10	14	8	Surface	Silver	9.63E+00					0.00E+00	0%
10	14	8	Surface	Total PAH	6.28E-02	4.48E-09	5.48E-08	9.08E-11		5.94E-08	2%
10	14	8	Surface	Uranium	3.35E+02					0.00E+00	0%
10	14	8	Surface	Uranium-235	2.38E-01	6.79E-10		2.71E-11	3.30E-08	3.38E-08	1%
10	14	8	Surface	Uranium-238	5.92E+00	2.18E-08		6.25E-10	1.73E-07	1.95E-07	7%
10	**14**	**8**	**Surface**	**Totals**		**2.94E-07**	**1.81E-06**	**1.98E-07**	**3.85E-07**	**2.69E-06**	
10	**14**	**8**	**Surface**	**Percent**		**11%**	**67%**	**7%**	**14%**		
10	14	9	Surface	Antimony	2.00E+00					0.00E+00	0%
10	14	9	Surface	Arsenic	1.40E+01	2.06E-07	5.81E-07	1.34E-09		7.89E-07	1%
10	14	9	Surface	Cadmium	9.40E-01			3.74E-11		3.74E-11	0%
10	14	9	Surface	Cesium-137	4.53E-01	3.43E-10		6.09E-14	2.94E-07	2.95E-07	1%
10	14	9	Surface	Chromium	4.64E+01			8.62E-08		8.62E-08	0%
10	14	9	Surface	Mercury	1.13E+00					0.00E+00	0%
10	14	9	Surface	Neptunium-237	1.09E+01	3.10E-08		2.18E-09	2.22E-06	2.26E-06	4%
10	14	9	Surface	Nickel	9.43E+02			5.42E-09		5.42E-09	0%
10	14	9	Surface	PCB, Total	6.84E+00	1.34E-07	1.76E-06	1.46E-07		2.04E-06	4%
10	14	9	Surface	Technetium-99	1.96E+02	2.63E-08		3.12E-11	4.08E-09	3.04E-08	0%
10	14	9	Surface	Total PAH	4.87E-01	3.48E-08	4.25E-07	7.05E-10		4.61E-07	1%
10	14	9	Surface	Uranium	1.46E+03					0.00E+00	0%
10	14	9	Surface	Uranium-234	8.32E+02	2.30E-06		1.07E-07	5.36E-08	2.46E-06	4%
10	14	9	Surface	Uranium-235	5.46E+01	1.56E-07		6.22E-09	7.57E-06	7.74E-06	14%
10	14	9	Surface	Uranium-238	1.20E+03	4.41E-06		1.27E-07	3.50E-05	3.95E-05	71%
10	**14**	**9**	**Surface**	**Totals**		**7.30E-06**	**2.77E-06**	**4.82E-07**	**4.51E-05**	**5.57E-05**	
10	**14**	**9**	**Surface**	**Percent**		**13%**	**5%**	**1%**	**81%**		
10	14	10	Surface	Antimony	9.40E-01					0.00E+00	0%
10	14	10	Surface	Arsenic	1.12E+01	1.65E-07	4.65E-07	1.07E-09		6.31E-07	11%
10	14	10	Surface	Chromium	4.19E+01			7.77E-08		7.77E-08	1%
10	14	10	Surface	Copper	1.41E+02					0.00E+00	0%
10	14	10	Surface	Iron	2.75E+04					0.00E+00	0%
10	14	10	Surface	Mercury	2.51E+01					0.00E+00	0%
10	14	10	Surface	Neptunium-237	2.64E+00	7.48E-09		5.28E-10	5.37E-07	5.45E-07	9%
10	14	10	Surface	Nickel	6.00E+02			3.45E-09		3.45E-09	0%
10	14	10	Surface	PCB, Total	9.38E+00	1.84E-07	2.42E-06	2.00E-07		2.80E-06	47%
10	14	10	Surface	Total PAH	2.72E-01	1.94E-08	2.37E-07	3.93E-10		2.57E-07	4%
10	14	10	Surface	Uranium	2.88E+02					0.00E+00	0%
10	14	10	Surface	Uranium-234	2.42E+01	6.69E-08		3.11E-09	1.56E-09	7.16E-08	1%
10	14	10	Surface	Uranium-235	1.76E+00	5.02E-09		2.01E-10	2.44E-07	2.50E-07	4%
10	14	10	Surface	Uranium-238	4.09E+01	1.50E-07		4.32E-09	1.19E-06	1.35E-06	23%
10	**14**	**10**	**Surface**	**Totals**		**5.98E-07**	**3.12E-06**	**2.90E-07**	**1.98E-06**	**5.98E-06**	
10	**14**	**10**	**Surface**	**Percent**		**10%**	**52%**	**5%**	**33%**		
10	518	1	Surface	Carbazole	1.17E+01	2.29E-09	2.16E-08			2.39E-08	0%
10	518	1	Surface	Cobalt	6.80E+00			1.35E-09		1.35E-09	0%
10	518	1	Surface	Nickel	1.29E+01			7.39E-11		7.39E-11	0%
10	518	1	Surface	PCB, Total	6.30E-01	1.23E-08	1.62E-07	1.34E-08		1.88E-07	1%
10	518	1	Surface	Pyrene	3.94E+01					0.00E+00	0%
10	518	1	Surface	Total PAH	3.90E+01	2.78E-06	3.40E-05	5.64E-08		3.68E-05	99%
10	518	1	Surface	Uranium	2.17E+02					0.00E+00	0%
10	518	1	Surface	Uranium-235	6.74E-02	1.92E-10		7.69E-12	9.36E-09	9.56E-09	0%
10	518	1	Surface	Uranium-238	1.51E+00	5.56E-09		1.60E-10	4.41E-08	4.99E-08	0%
10	**518**	**1**	**Surface**	**Totals**		**2.80E-06**	**3.42E-05**	**7.14E-08**	**5.35E-08**	**3.71E-05**	
10	**518**	**1**	**Surface**	**Percent**		**8%**	**92%**	**0%**	**0%**		
10	520	1	Surface	Cesium-137	9.62E-01	7.29E-10		1.29E-13	6.25E-07	6.26E-07	60%
10	520	1	Surface	Chromium	3.17E+01			5.89E-08		5.89E-08	6%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	520	1	Surface	Iron	1.56E+04					0.00E+00	0%
10	520	1	Surface	Mercury	1.07E+01					0.00E+00	0%
10	520	1	Surface	Neptunium-237	6.56E-01	1.86E-09		1.31E-10	1.34E-07	1.36E-07	13%
10	520	1	Surface	Nickel	2.60E+02			1.50E-09		1.50E-09	0%
10	520	1	Surface	Silver	1.30E+01					0.00E+00	0%
10	520	1	Surface	Thorium-230	1.13E+01	4.01E-08		3.65E-09	2.37E-09	4.61E-08	4%
10	520	1	Surface	Total PAH	3.18E-02	2.27E-09	2.78E-08	4.61E-11		3.01E-08	3%
10	520	1	Surface	Uranium	2.29E+01					0.00E+00	0%
10	520	1	Surface	Uranium-235	1.26E-01	3.59E-10		1.44E-11	1.75E-08	1.79E-08	2%
10	520	1	Surface	Uranium-238	3.93E+00	1.44E-08		4.15E-10	1.15E-07	1.29E-07	12%
10	**520**	**1**	**Surface**	**Totals**		**5.97E-08**	**2.78E-08**	**6.46E-08**	**8.93E-07**	**1.04E-06**	
10	**520**	**1**	**Surface**	**Percent**		**6%**	**3%**	**6%**	**85%**		
10	520	2	Surface	Beryllium	5.79E-01			3.07E-11		3.07E-11	0%
10	520	2	Surface	Chromium	6.67E+01			1.24E-07		1.24E-07	25%
10	520	2	Surface	Manganese	5.89E+02					0.00E+00	0%
10	520	2	Surface	Mercury	1.19E+01					0.00E+00	0%
10	520	2	Surface	Neptunium-237	7.48E-02	2.12E-10		1.49E-11	1.52E-08	1.55E-08	3%
10	520	2	Surface	Nickel	3.11E+02			1.78E-09		1.78E-09	0%
10	520	2	Surface	Total PAH	3.17E-01	2.26E-08	2.77E-07	4.59E-10		3.00E-07	60%
10	520	2	Surface	Uranium	3.96E+01					0.00E+00	0%
10	520	2	Surface	Uranium-238	1.78E+00	6.53E-09		1.88E-10	5.18E-08	5.86E-08	12%
10	**520**	**2**	**Surface**	**Totals**		**2.94E-08**	**2.77E-07**	**1.26E-07**	**6.71E-08**	**4.99E-07**	
10	**520**	**2**	**Surface**	**Percent**		**6%**	**55%**	**25%**	**13%**		
10	520	3	Surface	Chromium	3.97E+01			7.36E-08		7.36E-08	31%
10	520	3	Surface	Copper	1.19E+02					0.00E+00	0%
10	520	3	Surface	Nickel	2.65E+02			1.52E-09		1.52E-09	1%
10	520	3	Surface	Silver	1.27E+01					0.00E+00	0%
10	520	3	Surface	Total PAH	1.18E-01	8.44E-09	1.03E-07	1.71E-10		1.12E-07	47%
10	520	3	Surface	Uranium	1.92E+01					0.00E+00	0%
10	520	3	Surface	Uranium-238	1.57E+00	5.77E-09		1.66E-10	4.58E-08	5.17E-08	22%
10	**520**	**3**	**Surface**	**Totals**		**1.42E-08**	**1.03E-07**	**7.55E-08**	**4.58E-08**	**2.39E-07**	
10	**520**	**3**	**Surface**	**Percent**		**6%**	**43%**	**32%**	**19%**		
10	520	4	Surface	Chromium	3.82E+01			7.10E-08		7.10E-08	7%
10	520	4	Surface	Copper	1.11E+02					0.00E+00	0%
10	520	4	Surface	Mercury	9.69E+00					0.00E+00	0%
10	520	4	Surface	Neptunium-237	7.40E-01	2.10E-09		1.48E-10	1.51E-07	1.53E-07	15%
10	520	4	Surface	Nickel	2.82E+02			1.62E-09		1.62E-09	0%
10	520	4	Surface	Silver	1.04E+01					0.00E+00	0%
10	520	4	Surface	Total PAH	5.52E-01	3.95E-08	4.82E-07	7.99E-10		5.22E-07	53%
10	520	4	Surface	Uranium	2.40E+01					0.00E+00	0%
10	520	4	Surface	Uranium-235	2.42E-01	6.90E-10		2.76E-11	3.36E-08	3.43E-08	3%
10	520	4	Surface	Uranium-238	6.26E+00	2.30E-08		6.61E-10	1.82E-07	2.06E-07	21%
10	**520**	**4**	**Surface**	**Totals**		**6.53E-08**	**4.82E-07**	**7.42E-08**	**3.67E-07**	**9.88E-07**	
10	**520**	**4**	**Surface**	**Percent**		**7%**	**49%**	**8%**	**37%**		
10	520	5	Surface	Antimony	9.60E-01					0.00E+00	0%
10	520	5	Surface	Chromium	3.68E+01			6.83E-08		6.83E-08	13%
10	520	5	Surface	Neptunium-237	1.55E-01	4.39E-10		3.10E-11	3.15E-08	3.20E-08	6%
10	520	5	Surface	Nickel	1.47E+02			8.44E-10		8.44E-10	0%
10	520	5	Surface	Total PAH	3.87E-01	2.77E-08	3.38E-07	5.60E-10		3.66E-07	71%
10	520	5	Surface	Uranium-238	1.45E+00	5.33E-09		1.53E-10	4.23E-08	4.78E-08	9%
10	**520**	**5**	**Surface**	**Totals**		**3.34E-08**	**3.38E-07**	**6.99E-08**	**7.38E-08**	**5.15E-07**	
10	**520**	**5**	**Surface**	**Percent**		**6%**	**66%**	**14%**	**14%**		
11	81	1	Surface	Aluminum	9.57E+03					0.00E+00	0%
11	81	1	Surface	Arsenic	1.03E+01	1.50E-07	4.24E-07	9.77E-10		5.76E-07	1%
11	81	1	Surface	Beryllium	7.57E-01			4.01E-11		4.01E-11	0%
11	81	1	Surface	Chromium	8.62E+01			1.60E-07		1.60E-07	0%
11	81	1	Surface	Mercury	8.33E+00					0.00E+00	0%
11	81	1	Surface	Nickel	7.29E+01			4.19E-10		4.19E-10	0%
11	81	1	Surface	PCB, Total	1.60E+02	3.13E-06	4.12E-05	3.40E-06		4.77E-05	97%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.30. ELCR for the Current Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
11	81	1	Surface	Silver	2.70E+00					0.00E+00	0%
11	81	1	Surface	Total PAH	5.53E-01	3.95E-08	4.83E-07	8.00E-10		5.23E-07	1%
11	81	1	Surface	Uranium	6.50E+03					0.00E+00	0%
11	81	1	Surface	Uranium-238	2.29E+00	8.40E-09		2.41E-10	6.66E-08	7.52E-08	0%
11	**81**	**1**	**Surface**	**Totals**		**3.33E-06**	**4.21E-05**	**3.56E-06**	**6.66E-08**	**4.90E-05**	
11	**81**	**1**	**Surface**	**Percent**		**7%**	**86%**	**7%**	**0%**		
11	153	1	Surface	PCB, Total	5.09E-01	9.96E-09	1.31E-07	1.08E-08		1.52E-07	65%
11	153	1	Surface	Total PAH	8.69E-02	6.21E-09	7.59E-08	1.26E-10		8.22E-08	35%
11	**153**	**1**	**Surface**	**Totals**		**1.62E-08**	**2.07E-07**	**1.10E-08**		**2.34E-07**	
11	**153**	**1**	**Surface**	**Percent**		**7%**	**88%**	**5%**			
11	156	1	Surface	Chromium	4.90E+01			9.10E-08		9.10E-08	27%
11	156	1	Surface	Manganese	2.83E+03					0.00E+00	0%
11	156	1	Surface	Mercury	9.87E+00					0.00E+00	0%
11	156	1	Surface	Nickel	6.16E+01			3.54E-10		3.54E-10	0%
11	156	1	Surface	PCB, Total	3.00E-01	5.87E-09	7.73E-08	6.39E-09		8.95E-08	27%
11	156	1	Surface	Total PAH	8.26E-02	5.90E-09	7.21E-08	1.20E-10		7.81E-08	24%
11	156	1	Surface	Uranium	2.32E+01					0.00E+00	0%
11	156	1	Surface	Uranium-238	2.19E+00	8.05E-09		2.31E-10	6.38E-08	7.21E-08	22%
11	**156**	**1**	**Surface**	**Totals**		**1.98E-08**	**1.49E-07**	**9.81E-08**	**6.38E-08**	**3.31E-07**	
11	**156**	**1**	**Surface**	**Percent**		**6%**	**45%**	**30%**	**19%**		
11	160	1	Surface	Antimony	6.80E-01					0.00E+00	0%
11	160	1	Surface	Total PAH	5.29E-02	3.78E-09	4.62E-08	7.66E-11		5.00E-08	100%
11	**160**	**1**	**Surface**	**Totals**		**3.78E-09**	**4.62E-08**	**7.66E-11**		**5.00E-08**	
11	**160**	**1**	**Surface**	**Percent**		**8%**	**92%**	**0%**			
11	163	1	Surface	Chromium	4.94E+01			9.18E-08		9.18E-08	37%
11	163	1	Surface	Total PAH	1.63E-01	1.16E-08	1.42E-07	2.36E-10		1.54E-07	63%
11	**163**	**1**	**Surface**	**Totals**		**1.16E-08**	**1.42E-07**	**9.20E-08**		**2.46E-07**	
11	**163**	**1**	**Surface**	**Percent**		**5%**	**58%**	**37%**			
11	219	1	Surface	Neptunium-237	3.31E-01	9.38E-10		6.61E-11	6.74E-08	6.84E-08	22%
11	219	1	Surface	Nickel	6.71E+01			3.86E-10		3.86E-10	0%
11	219	1	Surface	Total PAH	7.50E-02	5.36E-09	6.55E-08	1.09E-10		7.10E-08	23%
11	219	1	Surface	Uranium-235	1.92E-01	5.48E-10		2.19E-11	2.67E-08	2.72E-08	9%
11	219	1	Surface	Uranium-238	4.40E+00	1.62E-08		4.64E-10	1.28E-07	1.45E-07	46%
11	**219**	**1**	**Surface**	**Totals**		**2.30E-08**	**6.55E-08**	**1.05E-09**	**2.22E-07**	**3.12E-07**	
11	**219**	**1**	**Surface**	**Percent**		**7%**	**21%**	**0%**	**71%**		
11	488	1	Surface	Cesium-137	5.20E-01	3.94E-10		6.99E-14	3.38E-07	3.38E-07	9%
11	488	1	Surface	PCB, Total	1.03E+01	2.02E-07	2.65E-06	2.19E-07		3.07E-06	80%
11	488	1	Surface	Total PAH	2.50E-01	1.78E-08	2.18E-07	3.61E-10		2.36E-07	6%
11	488	1	Surface	Uranium	1.48E+01					0.00E+00	0%
11	488	1	Surface	Uranium-235	1.49E-01	4.25E-10		1.70E-11	2.07E-08	2.11E-08	1%
11	488	1	Surface	Uranium-238	4.54E+00	1.67E-08		4.79E-10	1.32E-07	1.50E-07	4%
11	**488**	**1**	**Surface**	**Totals**		**2.37E-07**	**2.87E-06**	**2.20E-07**	**4.91E-07**	**3.82E-06**	
11	**488**	**1**	**Surface**	**Percent**		**6%**	**75%**	**6%**	**13%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	1	1	Surface	Beryllium	3.89E+00			3.69E-09		3.69E-09	0%
5	1	1	Surface	Cadmium	1.10E+00			7.81E-10		7.81E-10	0%
5	1	1	Surface	Cesium-137	5.91E-01	8.00E-09		1.42E-12	6.85E-06	6.86E-06	46%
5	1	1	Surface	Chromium	1.28E+01			4.25E-07		4.25E-07	3%
5	1	1	Surface	Neptunium-237	4.02E-01	2.04E-08		1.43E-09	1.46E-06	1.48E-06	10%
5	1	1	Surface	PCB, Total	1.76E-01	6.15E-08	8.09E-07	6.69E-08		9.38E-07	6%
5	1	1	Surface	Plutonium-239/240	6.14E+00	5.30E-07		4.12E-08	5.61E-09	5.77E-07	4%
5	1	1	Surface	Thorium-230	4.40E+01	2.78E-06		2.53E-07	1.65E-07	3.20E-06	21%
5	1	1	Surface	Uranium-235	1.06E-01	5.40E-09		2.16E-10	2.63E-07	2.68E-07	2%
5	1	1	Surface	Uranium-238	1.97E+00	1.30E-07		3.72E-09	1.03E-06	1.16E-06	8%
5	**1**	**1**	**Surface**	**Totals**		**3.53E-06**	**8.09E-07**	**7.96E-07**	**9.78E-06**	**1.49E-05**	
5	**1**	**1**	**Surface**	**Percent**		**24%**	**5%**	**5%**	**66%**		
5	1	2	Surface	Beryllium	8.23E+00			7.79E-09		7.79E-09	0%
5	1	2	Surface	Cadmium	6.46E+00			4.59E-09		4.59E-09	0%
5	1	2	Surface	Chromium	2.01E+02			6.67E-06		6.67E-06	4%
5	1	2	Surface	Copper	1.81E+02					0.00E+00	0%
5	1	2	Surface	Mercury	5.94E+00					0.00E+00	0%
5	1	2	Surface	Nickel	5.75E+01			5.90E-09		5.90E-09	0%
5	1	2	Surface	PCB, Total	3.21E+01	1.12E-05	1.48E-04	1.22E-05		1.71E-04	96%
5	1	2	Surface	Silver	3.31E+01					0.00E+00	0%
5	1	2	Surface	Thallium	3.70E-01					0.00E+00	0%
5	1	2	Surface	Vanadium	3.49E+01					0.00E+00	0%
5	**1**	**2**	**Surface**	**Totals**		**1.12E-05**	**1.48E-04**	**1.89E-05**		**1.78E-04**	
5	**1**	**2**	**Surface**	**Percent**		**6%**	**83%**	**11%**			
5	1	3	Surface	Chromium	1.45E+01			4.80E-07		4.80E-07	18%
5	1	3	Surface	PCB, Total	2.17E-01	7.58E-08	9.98E-07	8.25E-08		1.16E-06	44%
5	1	3	Surface	Uranium-238	1.73E+00	1.14E-07		3.26E-09	9.01E-07	1.02E-06	38%
5	**1**	**3**	**Surface**	**Totals**		**1.89E-07**	**9.98E-07**	**5.65E-07**	**9.01E-07**	**2.65E-06**	
5	**1**	**3**	**Surface**	**Percent**		**7%**	**38%**	**21%**	**34%**		
5	1	4	Surface	Beryllium	7.25E-01			6.87E-10		6.87E-10	0%
5	1	4	Surface	Chromium	9.30E+01			3.08E-06		3.08E-06	57%
5	1	4	Surface	Cobalt-60	2.20E-02	2.77E-10		1.59E-13	1.25E-06	1.25E-06	23%
5	1	4	Surface	Nickel	4.69E+01			4.81E-09		4.81E-09	0%
5	1	4	Surface	PCB, Total	1.30E-01	4.54E-08	5.98E-07	4.94E-08		6.93E-07	13%
5	1	4	Surface	Thorium-230	5.03E+00	3.18E-07		2.89E-08	1.88E-08	3.65E-07	7%
5	**1**	**4**	**Surface**	**Totals**		**3.63E-07**	**5.98E-07**	**3.17E-06**	**1.26E-06**	**5.39E-06**	
5	**1**	**4**	**Surface**	**Percent**		**7%**	**11%**	**59%**	**23%**		
5	1	5	Surface	Beryllium	8.30E+00			7.86E-09		7.86E-09	0%
5	1	5	Surface	Cadmium	1.20E+00			8.52E-10		8.52E-10	0%
5	1	5	Surface	Nickel	4.07E+01			4.18E-09		4.18E-09	0%
5	1	5	Surface	PCB, Total	2.70E-01	9.44E-08	1.24E-06	1.03E-07		1.44E-06	46%
5	1	5	Surface	Total PAH	9.83E-02	1.25E-07	1.53E-06	2.54E-09		1.66E-06	53%
5	**1**	**5**	**Surface**	**Totals**		**2.20E-07**	**2.77E-06**	**1.18E-07**		**3.11E-06**	
5	**1**	**5**	**Surface**	**Percent**		**7%**	**89%**	**4%**			
5	99	1	Surface	Chromium	5.51E+01			1.83E-06		1.83E-06	60%
5	99	1	Surface	Cobalt-60	1.19E-02	1.50E-10		8.59E-14	6.74E-07	6.74E-07	22%
5	99	1	Surface	Mercury	9.53E+00					0.00E+00	0%
5	99	1	Surface	Nickel	7.02E+01			7.20E-09		7.20E-09	0%
5	99	1	Surface	Silver	1.03E+01					0.00E+00	0%
5	99	1	Surface	Uranium-238	9.45E-01	6.20E-08		1.78E-09	4.92E-07	5.56E-07	18%
5	**99**	**1**	**Surface**	**Totals**		**6.22E-08**		**1.84E-06**	**1.17E-06**	**3.06E-06**	
5	**99**	**1**	**Surface**	**Percent**		**2%**		**60%**	**38%**		
5	194	1	Surface	Antimony	1.50E+00					0.00E+00	0%
5	194	1	Surface	Chromium	3.87E+01			1.28E-06		1.28E-06	100%
5	194	1	Surface	Mercury	6.71E+00					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	1	Surface	Nickel	5.84E+01			5.99E-09		5.99E-09	0%
5	194	1	Surface	Silver	1.09E+01					0.00E+00	0%
5	**194**	**1**	**Surface**	**Totals**				**1.29E-06**		**1.29E-06**	
5	**194**	**1**	**Surface**	**Percent**				**100%**			
5	194	2	Surface	Chromium	5.96E+01			1.98E-06		1.98E-06	70%
5	194	2	Surface	Silver	1.31E+01					0.00E+00	0%
5	194	2	Surface	Uranium	2.28E+01					0.00E+00	0%
5	194	2	Surface	Uranium-238	1.42E+00	9.32E-08		2.68E-09	7.39E-07	8.35E-07	30%
5	**194**	**2**	**Surface**	**Totals**		**9.32E-08**		**1.98E-06**	**7.39E-07**	**2.81E-06**	
5	**194**	**2**	**Surface**	**Percent**		**3%**		**70%**	**26%**		
5	194	3	Surface	Antimony	6.90E-01					0.00E+00	0%
5	194	3	Surface	Arsenic	1.46E+01	3.84E-06	1.08E-05	2.49E-08		1.47E-05	84%
5	194	3	Surface	Chromium	3.90E+01			1.29E-06		1.29E-06	7%
5	194	3	Surface	Nickel	6.40E+01			6.57E-09		6.57E-09	0%
5	194	3	Surface	Total PAH	3.93E-02	5.01E-08	6.13E-07	1.02E-09		6.64E-07	4%
5	194	3	Surface	Uranium-238	1.28E+00	8.43E-08		2.42E-09	6.68E-07	7.55E-07	4%
5	**194**	**3**	**Surface**	**Totals**		**3.97E-06**	**1.14E-05**	**1.33E-06**	**6.68E-07**	**1.74E-05**	
5	**194**	**3**	**Surface**	**Percent**		**23%**	**66%**	**8%**	**4%**		
5	194	4	Surface	Chromium	4.84E+01			1.60E-06		1.60E-06	42%
5	194	4	Surface	Mercury	8.92E+00					0.00E+00	0%
5	194	4	Surface	Nickel	6.91E+01			7.08E-09		7.08E-09	0%
5	194	4	Surface	Silver	1.18E+01					0.00E+00	0%
5	194	4	Surface	Total PAH	7.30E-02	9.31E-08	1.14E-06	1.89E-09		1.23E-06	32%
5	194	4	Surface	Uranium-238	1.73E+00	1.14E-07		3.26E-09	9.01E-07	1.02E-06	26%
5	**194**	**4**	**Surface**	**Totals**		**2.07E-07**	**1.14E-06**	**1.62E-06**	**9.01E-07**	**3.86E-06**	
5	**194**	**4**	**Surface**	**Percent**		**5%**	**29%**	**42%**	**23%**		
5	194	5	Surface	Chromium	4.58E+01			1.52E-06		1.52E-06	55%
5	194	5	Surface	Mercury	8.69E+00					0.00E+00	0%
5	194	5	Surface	Nickel	7.54E+01			7.74E-09		7.74E-09	0%
5	194	5	Surface	Silver	1.25E+01					0.00E+00	0%
5	194	5	Surface	Total PAH	2.37E-02	3.02E-08	3.69E-07	6.12E-10		4.00E-07	15%
5	194	5	Surface	Uranium-238	1.38E+00	9.06E-08		2.60E-09	7.18E-07	8.12E-07	30%
5	**194**	**5**	**Surface**	**Totals**		**1.21E-07**	**3.69E-07**	**1.53E-06**	**7.18E-07**	**2.74E-06**	
5	**194**	**5**	**Surface**	**Percent**		**4%**	**13%**	**56%**	**26%**		
5	194	6	Surface	Chromium	3.70E+01			1.23E-06		1.23E-06	61%
5	194	6	Surface	Manganese	1.08E+03					0.00E+00	0%
5	194	6	Surface	Nickel	8.06E+01			8.27E-09		8.27E-09	0%
5	194	6	Surface	Silver	9.89E+00					0.00E+00	0%
5	194	6	Surface	Uranium-238	1.32E+00	8.66E-08		2.49E-09	6.87E-07	7.76E-07	39%
5	**194**	**6**	**Surface**	**Totals**		**8.66E-08**		**1.24E-06**	**6.87E-07**	**2.01E-06**	
5	**194**	**6**	**Surface**	**Percent**		**4%**		**62%**	**34%**		
5	194	7	Surface	Chromium	5.32E+01			1.76E-06		1.76E-06	100%
5	194	7	Surface	Nickel	7.71E+01			7.91E-09		7.91E-09	0%
5	194	7	Surface	Silver	1.25E+01					0.00E+00	0%
5	**194**	**7**	**Surface**	**Totals**				**1.77E-06**		**1.77E-06**	
5	**194**	**7**	**Surface**	**Percent**				**100%**			
5	194	8	Surface	Bis(2-ethylhexyl)phthalate	1.50E+01	3.67E-08	3.45E-07	1.42E-11		3.82E-07	3%
5	194	8	Surface	Chromium	5.36E+01			1.78E-06		1.78E-06	16%
5	194	8	Surface	Manganese	8.00E+02					0.00E+00	0%
5	194	8	Surface	Total PAH	4.85E-01	6.19E-07	7.56E-06	1.25E-08		8.19E-06	73%
5	194	8	Surface	Uranium-238	1.39E+00	9.12E-08		2.62E-09	7.24E-07	8.17E-07	7%
5	**194**	**8**	**Surface**	**Totals**		**7.47E-07**	**7.90E-06**	**1.79E-06**	**7.24E-07**	**1.12E-05**	
5	**194**	**8**	**Surface**	**Percent**		**7%**	**71%**	**16%**	**6%**		
5	194	9	Surface	Arsenic	1.14E+01	2.99E-06	8.44E-06	1.94E-08		1.15E-05	87%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	9	Surface	Chromium	5.17E+01			1.71E-06		1.71E-06	13%
5	**194**	**9**	**Surface**	**Totals**		**2.99E-06**	**8.44E-06**	**1.73E-06**		**1.32E-05**	
5	**194**	**9**	**Surface**	**Percent**		**23%**	**64%**	**13%**			
5	194	10	Surface	Arsenic	1.22E+01	3.19E-06	8.99E-06	2.07E-08		1.22E-05	48%
5	194	10	Surface	Cesium-137	5.81E-01	7.86E-09		1.39E-12	6.74E-06	6.75E-06	27%
5	194	10	Surface	Chromium	3.63E+01			1.20E-06		1.20E-06	5%
5	194	10	Surface	Nickel	7.60E+01			7.80E-09		7.80E-09	0%
5	194	10	Surface	Total PAH	2.57E-01	3.28E-07	4.01E-06	6.64E-09		4.34E-06	17%
5	194	10	Surface	Uranium-238	1.49E+00	9.78E-08		2.81E-09	7.76E-07	8.76E-07	3%
5	**194**	**10**	**Surface**	**Totals**		**3.62E-06**	**1.30E-05**	**1.24E-06**	**7.51E-06**	**2.54E-05**	
5	**194**	**10**	**Surface**	**Percent**		**14%**	**51%**	**5%**	**30%**		
5	194	11	Surface	Chromium	3.27E+01			1.08E-06		1.08E-06	38%
5	194	11	Surface	Mercury	8.09E+00					0.00E+00	0%
5	194	11	Surface	Nickel	1.01E+02			1.03E-08		1.03E-08	0%
5	194	11	Surface	PCB, Total	8.40E-02	2.94E-08	3.86E-07	3.19E-08		4.48E-07	16%
5	194	11	Surface	Silver	1.33E+01					0.00E+00	0%
5	194	11	Surface	Total PAH	7.95E-02	1.01E-07	1.24E-06	2.05E-09		1.34E-06	47%
5	**194**	**11**	**Surface**	**Totals**		**1.31E-07**	**1.63E-06**	**1.13E-06**		**2.88E-06**	
5	**194**	**11**	**Surface**	**Percent**		**5%**	**56%**	**39%**			
5	194	12	Surface	Chromium	6.34E+01			2.10E-06		2.10E-06	12%
5	194	12	Surface	Nickel	7.86E+01			8.06E-09		8.06E-09	0%
5	194	12	Surface	Silver	1.20E+01					0.00E+00	0%
5	194	12	Surface	Total PAH	8.91E-01	1.14E-06	1.39E-05	2.30E-08		1.51E-05	88%
5	**194**	**12**	**Surface**	**Totals**		**1.14E-06**	**1.39E-05**	**2.13E-06**		**1.72E-05**	
5	**194**	**12**	**Surface**	**Percent**		**7%**	**81%**	**12%**			
5	194	13	Surface	Chromium	4.77E+01			1.58E-06		1.58E-06	50%
5	194	13	Surface	Nickel	6.03E+01			6.19E-09		6.19E-09	0%
5	194	13	Surface	Total PAH	9.13E-02	1.17E-07	1.42E-06	2.36E-09		1.54E-06	49%
5	**194**	**13**	**Surface**	**Totals**		**1.17E-07**	**1.42E-06**	**1.59E-06**		**3.13E-06**	
5	**194**	**13**	**Surface**	**Percent**		**4%**	**46%**	**51%**			
5	194	14	Surface	Chromium	5.21E+01			1.73E-06		1.73E-06	100%
5	194	14	Surface	Mercury	8.14E+00					0.00E+00	0%
5	**194**	**14**	**Surface**	**Totals**				**1.73E-06**		**1.73E-06**	
5	**194**	**14**	**Surface**	**Percent**				**100%**			
5	194	15	Surface	Chromium	5.33E+01			1.77E-06		1.77E-06	100%
5	194	15	Surface	Silver	1.03E+01					0.00E+00	0%
5	**194**	**15**	**Surface**	**Totals**				**1.77E-06**		**1.77E-06**	
5	**194**	**15**	**Surface**	**Percent**				**100%**			
5	194	16	Surface	Antimony	7.40E-01					0.00E+00	0%
5	194	16	Surface	Arsenic	1.15E+01	3.02E-06	8.51E-06	1.96E-08		1.16E-05	87%
5	194	16	Surface	Beryllium	8.70E-01			8.24E-10		8.24E-10	0%
5	194	16	Surface	Chromium	5.32E+01			1.76E-06		1.76E-06	13%
5	194	16	Surface	Nickel	7.20E+01			7.39E-09		7.39E-09	0%
5	194	16	Surface	Thallium	6.30E-01					0.00E+00	0%
5	194	16	Surface	Vanadium	4.11E+01					0.00E+00	0%
5	**194**	**16**	**Surface**	**Totals**		**3.02E-06**	**8.51E-06**	**1.79E-06**		**1.33E-05**	
5	**194**	**16**	**Surface**	**Percent**		**23%**	**64%**	**13%**			
5	194	17	Surface	Arsenic	1.16E+01	3.03E-06	8.54E-06	1.97E-08		1.16E-05	73%
5	194	17	Surface	Cadmium	1.10E+00			7.81E-10		7.81E-10	0%
5	194	17	Surface	Chromium	4.65E+01			1.54E-06		1.54E-06	10%
5	194	17	Surface	Total PAH	1.59E-01	2.02E-07	2.47E-06	4.10E-09		2.68E-06	17%
5	**194**	**17**	**Surface**	**Totals**		**3.23E-06**	**1.10E-05**	**1.56E-06**		**1.58E-05**	
5	**194**	**17**	**Surface**	**Percent**		**20%**	**70%**	**10%**			
5	194	18	Surface	Arsenic	1.06E+01	2.77E-06	7.81E-06	1.80E-08		1.06E-05	82%
5	194	18	Surface	Beryllium	7.40E-01			7.01E-10		7.01E-10	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	18	Surface	Chromium	6.85E+01			2.27E-06		2.27E-06	18%
5	194	18	Surface	Nickel	5.78E+01			5.93E-09		5.93E-09	0%
5	**194**	**18**	**Surface**	**Totals**		**2.77E-06**	**7.81E-06**	**2.29E-06**		**1.29E-05**	
5	**194**	**18**	**Surface**	**Percent**		**22%**	**61%**	**18%**			
5	194	19	Surface	Arsenic	1.07E+01	2.80E-06	7.90E-06	1.82E-08		1.07E-05	87%
5	194	19	Surface	Chromium	4.84E+01			1.60E-06		1.60E-06	13%
5	194	19	Surface	Nickel	5.84E+01			5.99E-09		5.99E-09	0%
5	**194**	**19**	**Surface**	**Totals**		**2.80E-06**	**7.90E-06**	**1.63E-06**		**1.23E-05**	
5	**194**	**19**	**Surface**	**Percent**		**23%**	**64%**	**13%**			
5	194	20	Surface	Arsenic	1.18E+01	3.10E-06	8.75E-06	2.02E-08		1.19E-05	84%
5	194	20	Surface	Barium	3.26E+02					0.00E+00	0%
5	194	20	Surface	Beryllium	1.10E+00			1.04E-09		1.04E-09	0%
5	194	20	Surface	Chromium	5.24E+01			1.74E-06		1.74E-06	12%
5	194	20	Surface	Cobalt	2.11E+01			7.49E-08		7.49E-08	1%
5	194	20	Surface	Manganese	2.29E+03					0.00E+00	0%
5	194	20	Surface	Mercury	7.28E+00					0.00E+00	0%
5	194	20	Surface	Nickel	6.57E+01			6.74E-09		6.74E-09	0%
5	194	20	Surface	Silver	1.22E+01					0.00E+00	0%
5	194	20	Surface	Total PAH	3.10E-02	3.95E-08	4.83E-07	8.01E-10		5.24E-07	4%
5	194	20	Surface	Vanadium	3.81E+01					0.00E+00	0%
5	**194**	**20**	**Surface**	**Totals**		**3.14E-06**	**9.23E-06**	**1.84E-06**		**1.42E-05**	
5	**194**	**20**	**Surface**	**Percent**		**22%**	**65%**	**13%**			
5	194	21	Surface	Antimony	9.30E-01					0.00E+00	0%
5	194	21	Surface	Chromium	5.51E+01			1.83E-06		1.83E-06	100%
5	194	21	Surface	Mercury	6.62E+00					0.00E+00	0%
5	194	21	Surface	Nickel	7.01E+01			7.19E-09		7.19E-09	0%
5	194	21	Surface	Thallium	6.40E-01					0.00E+00	0%
5	**194**	**21**	**Surface**	**Totals**				**1.83E-06**		**1.83E-06**	
5	**194**	**21**	**Surface**	**Percent**				**100%**			
5	194	22	Surface	Chromium	4.90E+01			1.62E-06		1.62E-06	3%
5	194	22	Surface	Manganese	8.19E+02					0.00E+00	0%
5	194	22	Surface	PCB, Total	1.09E+01	3.82E-06	5.02E-05	4.15E-06		5.82E-05	97%
5	**194**	**22**	**Surface**	**Totals**		**3.82E-06**	**5.02E-05**	**5.77E-06**		**5.98E-05**	
5	**194**	**22**	**Surface**	**Percent**		**6%**	**84%**	**10%**			
5	194	23	Surface	Arsenic	1.16E+01	3.03E-06	8.54E-06	1.97E-08		1.16E-05	84%
5	194	23	Surface	Chromium	6.60E+01			2.19E-06		2.19E-06	16%
5	194	23	Surface	Iron	1.83E+04					0.00E+00	0%
5	194	23	Surface	Nickel	8.77E+01			9.00E-09		9.00E-09	0%
5	194	23	Surface	Silver	1.15E+01					0.00E+00	0%
5	**194**	**23**	**Surface**	**Totals**		**3.03E-06**	**8.54E-06**	**2.22E-06**		**1.38E-05**	
5	**194**	**23**	**Surface**	**Percent**		**22%**	**62%**	**16%**			
5	194	24	Surface	Chromium	5.02E+01			1.66E-06		1.66E-06	81%
5	194	24	Surface	Nickel	7.08E+01			7.26E-09		7.26E-09	0%
5	194	24	Surface	Total PAH	2.28E-02	2.91E-08	3.55E-07	5.89E-10		3.85E-07	19%
5	**194**	**24**	**Surface**	**Totals**		**2.91E-08**	**3.55E-07**	**1.67E-06**		**2.06E-06**	
5	**194**	**24**	**Surface**	**Percent**		**1%**	**17%**	**81%**			
5	194	25	Surface	Barium	3.00E+02					0.00E+00	0%
5	194	25	Surface	Chromium	6.13E+01			2.03E-06		2.03E-06	85%
5	194	25	Surface	Manganese	9.96E+02					0.00E+00	0%
5	194	25	Surface	Nickel	6.33E+01			6.50E-09		6.50E-09	0%
5	194	25	Surface	Total PAH	2.06E-02	2.63E-08	3.21E-07	5.32E-10		3.48E-07	15%
5	**194**	**25**	**Surface**	**Totals**		**2.63E-08**	**3.21E-07**	**2.04E-06**		**2.38E-06**	
5	**194**	**25**	**Surface**	**Percent**		**1%**	**13%**	**85%**			
5	194	26	Surface	Beryllium	7.00E-01			6.63E-10		6.63E-10	0%
5	194	26	Surface	Chromium	4.18E+01			1.39E-06		1.39E-06	100%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	26	Surface	Silver	1.03E+01					0.00E+00	0%
5	194	26	Surface	Thallium	3.90E-01					0.00E+00	0%
5	**194**	**26**	**Surface**	**Totals**				**1.39E-06**		**1.39E-06**	
5	**194**	**26**	**Surface**	**Percent**				**100%**			
5	194	27	Surface	Chromium	5.22E+01			1.73E-06		1.73E-06	100%
5	194	27	Surface	Nickel	6.55E+01			6.72E-09		6.72E-09	0%
5	194	27	Surface	Silver	1.01E+01					0.00E+00	0%
5	**194**	**27**	**Surface**	**Totals**				**1.74E-06**		**1.74E-06**	
5	**194**	**27**	**Surface**	**Percent**				**100%**			
5	194	28	Surface	Arsenic	1.20E+01	3.15E-06	8.89E-06	2.05E-08		1.21E-05	86%
5	194	28	Surface	Beryllium	7.10E-01			6.72E-10		6.72E-10	0%
5	194	28	Surface	Chromium	6.07E+01			2.01E-06		2.01E-06	14%
5	194	28	Surface	Manganese	1.14E+03					0.00E+00	0%
5	194	28	Surface	Nickel	6.95E+01			7.12E-09		7.12E-09	0%
5	194	28	Surface	Silver	1.08E+01					0.00E+00	0%
5	194	28	Surface	Vanadium	4.06E+01					0.00E+00	0%
5	**194**	**28**	**Surface**	**Totals**		**3.15E-06**	**8.89E-06**	**2.04E-06**		**1.41E-05**	
5	**194**	**28**	**Surface**	**Percent**		**22%**	**63%**	**14%**			
5	194	29	Surface	Antimony	7.10E-01					0.00E+00	0%
5	194	29	Surface	Chromium	5.06E+01			1.68E-06		1.68E-06	100%
5	194	29	Surface	Nickel	6.51E+01			6.68E-09		6.68E-09	0%
5	194	29	Surface	Silver	9.77E+00					0.00E+00	0%
5	**194**	**29**	**Surface**	**Totals**				**1.68E-06**		**1.68E-06**	
5	**194**	**29**	**Surface**	**Percent**				**100%**			
5	194	30	Surface	Chromium	5.66E+01			1.87E-06		1.87E-06	100%
5	194	30	Surface	Mercury	8.80E+00					0.00E+00	0%
5	194	30	Surface	Nickel	6.99E+01			7.17E-09		7.17E-09	0%
5	194	30	Surface	Silver	9.76E+00					0.00E+00	0%
5	**194**	**30**	**Surface**	**Totals**				**1.88E-06**		**1.88E-06**	
5	**194**	**30**	**Surface**	**Percent**				**100%**			
5	194	31	Surface	Cesium-137	5.70E-01	7.71E-09		1.37E-12	6.61E-06	6.62E-06	87%
5	194	31	Surface	Uranium-238	1.72E+00	1.13E-07		3.24E-09	8.95E-07	1.01E-06	13%
5	**194**	**31**	**Surface**	**Totals**		**1.21E-07**		**3.24E-09**	**7.51E-06**	**7.63E-06**	
5	**194**	**31**	**Surface**	**Percent**		**2%**		**0%**	**98%**		
5	196	1	Surface	Antimony	5.90E-01					0.00E+00	0%
5	196	1	Surface	Chromium	1.96E+01			6.50E-07		6.50E-07	24%
5	196	1	Surface	Neptunium-237	3.11E-01	1.57E-08		1.11E-09	1.13E-06	1.15E-06	42%
5	196	1	Surface	Nickel	5.56E+02			5.70E-08		5.70E-08	2%
5	196	1	Surface	Uranium	2.33E+01					0.00E+00	0%
5	196	1	Surface	Uranium-238	1.54E+00	1.01E-07		2.90E-09	8.02E-07	9.06E-07	33%
5	**196**	**1**	**Surface**	**Totals**		**1.17E-07**		**7.11E-07**	**1.93E-06**	**2.76E-06**	
5	**196**	**1**	**Surface**	**Percent**		**4%**		**26%**	**70%**		
5	196	2	Surface	Barium	2.02E+02					0.00E+00	0%
5	196	2	Surface	Cadmium	2.53E+00			1.80E-09		1.80E-09	0%
5	196	2	Surface	Chromium	2.07E+01			6.86E-07		6.86E-07	3%
5	196	2	Surface	Nickel	7.36E+01			7.55E-09		7.55E-09	0%
5	196	2	Surface	PCB, Total	1.51E+00	5.28E-07	6.94E-06	5.74E-07		8.05E-06	37%
5	196	2	Surface	Total PAH	6.80E-01	8.67E-07	1.06E-05	1.76E-08		1.15E-05	53%
5	196	2	Surface	Uranium-238	2.21E+00	1.45E-07		4.17E-09	1.15E-06	1.30E-06	6%
5	**196**	**2**	**Surface**	**Totals**		**1.54E-06**	**1.75E-05**	**1.29E-06**	**1.15E-06**	**2.15E-05**	
5	**196**	**2**	**Surface**	**Percent**		**7%**	**82%**	**6%**	**5%**		
5	489	1	Surface	Chromium	4.16E+01			1.38E-06		1.38E-06	38%
5	489	1	Surface	Nickel	7.88E+01			8.09E-09		8.09E-09	0%
5	489	1	Surface	Total PAH	8.22E-02	1.05E-07	1.28E-06	2.12E-09		1.39E-06	38%
5	489	1	Surface	Uranium-238	1.47E+00	9.65E-08		2.77E-09	7.65E-07	8.64E-07	24%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	**489**	**1**	**Surface**	**Totals**		**2.01E-07**	**1.28E-06**	**1.39E-06**	**7.65E-07**	**3.64E-06**	
5	**489**	**1**	**Surface**	**Percent**		**6%**	**35%**	**38%**	**21%**		
5	531	1	Surface	Antimony	1.00E+00					0.00E+00	0%
5	531	1	Surface	Arsenic	4.68E+01	1.23E-05	3.46E-05	7.97E-08		4.70E-05	90%
5	531	1	Surface	Cadmium	3.10E+00			2.20E-09		2.20E-09	0%
5	531	1	Surface	Chromium	5.05E+01			1.67E-06		1.67E-06	3%
5	531	1	Surface	Iron	5.68E+04					0.00E+00	0%
5	531	1	Surface	Nickel	1.62E+02			1.66E-08		1.66E-08	0%
5	531	1	Surface	Total PAH	5.34E-02	6.81E-08	8.32E-07	1.38E-09		9.01E-07	2%
5	531	1	Surface	Uranium	2.41E+01					0.00E+00	0%
5	531	1	Surface	Uranium-235	1.38E-01	7.03E-09		2.81E-10	3.42E-07	3.49E-07	1%
5	531	1	Surface	Uranium-238	3.48E+00	2.28E-07		6.56E-09	1.81E-06	2.05E-06	4%
5	531	1	Surface	Zinc	2.45E+03					0.00E+00	0%
5	**531**	**1**	**Surface**	**Totals**		**1.26E-05**	**3.54E-05**	**1.78E-06**	**2.15E-06**	**5.19E-05**	
5	**531**	**1**	**Surface**	**Percent**		**24%**	**68%**	**3%**	**4%**		
6	200	1	Surface	Antimony	5.60E-01					0.00E+00	0%
6	200	1	Surface	Cesium-137	5.74E-01	7.77E-09		1.38E-12	6.66E-06	6.67E-06	26%
6	200	1	Surface	Chromium	5.75E+01			1.91E-06		1.91E-06	8%
6	200	1	Surface	Mercury	6.71E+00					0.00E+00	0%
6	200	1	Surface	Nickel	1.28E+02			1.31E-08		1.31E-08	0%
6	200	1	Surface	PCB, Total	2.60E+00	9.09E-07	1.20E-05	9.88E-07		1.39E-05	55%
6	200	1	Surface	Total PAH	2.84E-02	3.62E-08	4.43E-07	7.34E-10		4.80E-07	2%
6	200	1	Surface	Uranium	2.73E+01					0.00E+00	0%
6	200	1	Surface	Uranium-235	1.43E-01	7.28E-09		2.91E-10	3.55E-07	3.62E-07	1%
6	200	1	Surface	Uranium-238	3.58E+00	2.35E-07		6.74E-09	1.86E-06	2.10E-06	8%
6	**200**	**1**	**Surface**	**Totals**		**1.19E-06**	**1.24E-05**	**2.92E-06**	**8.87E-06**	**2.54E-05**	
6	**200**	**1**	**Surface**	**Percent**		**5%**	**49%**	**11%**	**35%**		
6	212	1	Surface	Arsenic	1.44E+01	3.78E-06	1.07E-05	2.45E-08		1.45E-05	24%
6	212	1	Surface	Beryllium	8.10E-01			7.67E-10		7.67E-10	0%
6	212	1	Surface	Cesium-137	6.01E-01	8.13E-09		1.44E-12	6.97E-06	6.98E-06	11%
6	212	1	Surface	Chromium	3.58E+01			1.19E-06		1.19E-06	2%
6	212	1	Surface	Cobalt-60	8.76E-03	1.10E-10		6.32E-14	4.96E-07	4.96E-07	1%
6	212	1	Surface	Iron	4.14E+04					0.00E+00	0%
6	212	1	Surface	Neptunium-237	4.00E+00	2.03E-07		1.43E-08	1.45E-05	1.48E-05	24%
6	212	1	Surface	Nickel	8.69E+01			8.92E-09		8.92E-09	0%
6	212	1	Surface	PCB, Total	1.80E-01	6.29E-08	8.28E-07	6.84E-08		9.59E-07	2%
6	212	1	Surface	Plutonium-239/240	6.71E+00	5.79E-07		4.50E-08	6.13E-09	6.30E-07	1%
6	212	1	Surface	Thorium-230	2.60E+02	1.64E-05		1.49E-06	9.72E-07	1.89E-05	31%
6	212	1	Surface	Uranium	2.30E+01					0.00E+00	0%
6	212	1	Surface	Uranium-235	2.09E-01	1.06E-08		4.26E-10	5.18E-07	5.29E-07	1%
6	212	1	Surface	Uranium-238	3.17E+00	2.08E-07		5.98E-09	1.65E-06	1.86E-06	3%
6	**212**	**1**	**Surface**	**Totals**		**2.13E-05**	**1.15E-05**	**2.85E-06**	**2.52E-05**	**6.07E-05**	
6	**212**	**1**	**Surface**	**Percent**		**35%**	**19%**	**5%**	**41%**		
6	213	1	Surface	Antimony	8.50E-01					0.00E+00	0%
6	213	1	Surface	Chromium	4.78E+01			1.58E-06		1.58E-06	25%
6	213	1	Surface	Nickel	6.67E+01			6.85E-09		6.85E-09	0%
6	213	1	Surface	PCB, Total	7.30E-02	2.55E-08	3.36E-07	2.77E-08		3.89E-07	6%
6	213	1	Surface	Silver	1.32E+01					0.00E+00	0%
6	213	1	Surface	Total PAH	1.72E-01	2.19E-07	2.68E-06	4.44E-09		2.90E-06	46%
6	213	1	Surface	Uranium-238	2.33E+00	1.53E-07		4.39E-09	1.21E-06	1.37E-06	22%
6	**213**	**1**	**Surface**	**Totals**		**3.98E-07**	**3.01E-06**	**1.63E-06**	**1.21E-06**	**6.25E-06**	
6	**213**	**1**	**Surface**	**Percent**		**6%**	**48%**	**26%**	**19%**		
6	213	2	Surface	Chromium	4.48E+01			1.49E-06		1.49E-06	99%
6	213	2	Surface	Nickel	9.10E+01			9.33E-09		9.33E-09	1%
6	213	2	Surface	Silver	1.13E+01					0.00E+00	0%

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EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	**213**	**2**	**Surface**	**Totals**				**1.49E-06**		**1.49E-06**	
6	**213**	**2**	**Surface**	**Percent**				**100%**			
6	214	1	Surface	Antimony	5.70E-01					0.00E+00	
6	**214**	**1**	**Surface**	**Totals**						**0.00E+00**	
6	**214**	**1**	**Surface**	**Percent**							
6	215	1	Surface	Antimony	6.80E-01					0.00E+00	0%
6	215	1	Surface	Chromium	5.73E+01			1.90E-06		1.90E-06	58%
6	215	1	Surface	Iron	3.87E+04					0.00E+00	0%
6	215	1	Surface	Nickel	7.32E+01			7.50E-09		7.50E-09	0%
6	215	1	Surface	Total PAH	8.09E-02	1.03E-07	1.26E-06	2.09E-09		1.37E-06	42%
6	**215**	**1**	**Surface**	**Totals**		**1.03E-07**	**1.26E-06**	**1.91E-06**		**3.27E-06**	
6	**215**	**1**	**Surface**	**Percent**		**3%**	**39%**	**58%**			
6	216	1	Surface	Chromium	2.38E+01			7.89E-07		7.89E-07	19%
6	216	1	Surface	Total PAH	1.49E-01	1.90E-07	2.33E-06	3.86E-09		2.52E-06	62%
6	216	1	Surface	Uranium-238	1.33E+00	8.73E-08		2.51E-09	6.92E-07	7.82E-07	19%
6	**216**	**1**	**Surface**	**Totals**		**2.78E-07**	**2.33E-06**	**7.95E-07**	**6.92E-07**	**4.09E-06**	
6	**216**	**1**	**Surface**	**Percent**		**7%**	**57%**	**19%**	**17%**		
6	217	1	Surface	Chromium	8.58E+01			2.84E-06		2.84E-06	79%
6	217	1	Surface	Cobalt	1.96E+01			6.95E-08		6.95E-08	2%
6	217	1	Surface	Manganese	7.70E+02					0.00E+00	0%
6	217	1	Surface	Nickel	8.54E+01			8.76E-09		8.76E-09	0%
6	217	1	Surface	Silver	1.35E+01					0.00E+00	0%
6	217	1	Surface	Uranium-238	1.15E+00	7.57E-08		2.18E-09	6.01E-07	6.79E-07	19%
6	**217**	**1**	**Surface**	**Totals**		**7.57E-08**		**2.92E-06**	**6.01E-07**	**3.60E-06**	
6	**217**	**1**	**Surface**	**Percent**		**2%**		**81%**	**17%**		
6	217	2	Surface	Antimony	1.70E+00					0.00E+00	0%
6	217	2	Surface	Arsenic	1.12E+01	2.92E-06	8.25E-06	1.90E-08		1.12E-05	48%
6	217	2	Surface	Chromium	1.02E+02			3.37E-06		3.37E-06	15%
6	217	2	Surface	Cobalt	1.74E+01			6.18E-08		6.18E-08	0%
6	217	2	Surface	Iron	3.09E+04					0.00E+00	0%
6	217	2	Surface	Manganese	8.44E+02					0.00E+00	0%
6	217	2	Surface	Mercury	8.59E+00					0.00E+00	0%
6	217	2	Surface	Nickel	9.74E+01			9.99E-09		9.99E-09	0%
6	217	2	Surface	Silver	1.61E+01					0.00E+00	0%
6	217	2	Surface	Total PAH	5.05E-01	6.44E-07	7.87E-06	1.30E-08		8.53E-06	37%
6	**217**	**2**	**Surface**	**Totals**		**3.57E-06**	**1.61E-05**	**3.47E-06**		**2.32E-05**	
6	**217**	**2**	**Surface**	**Percent**		**15%**	**70%**	**15%**			
6	221	1	Surface	Barium	2.21E+02					0.00E+00	0%
6	221	1	Surface	Chromium	7.01E+01			2.32E-06		2.32E-06	10%
6	221	1	Surface	Iron	1.90E+04					0.00E+00	0%
6	221	1	Surface	Nickel	7.93E+01			8.13E-09		8.13E-09	0%
6	221	1	Surface	PCB, Total	5.00E-01	1.75E-07	2.30E-06	1.90E-07		2.66E-06	11%
6	221	1	Surface	Total PAH	1.02E+00	1.30E-06	1.59E-05	2.64E-08		1.73E-05	74%
6	221	1	Surface	Uranium	1.64E+01					0.00E+00	0%
6	221	1	Surface	Uranium-238	1.93E+00	1.27E-07		3.64E-09	1.00E-06	1.13E-06	5%
6	**221**	**1**	**Surface**	**Totals**		**1.61E-06**	**1.82E-05**	**2.55E-06**	**1.00E-06**	**2.34E-05**	
6	**221**	**1**	**Surface**	**Percent**		**7%**	**78%**	**11%**	**4%**		
6	222	1	Surface	Chromium	4.73E+01			1.57E-06		1.57E-06	6%
6	222	1	Surface	Nickel	9.19E+01			9.43E-09		9.43E-09	0%
6	222	1	Surface	PCB, Total	1.40E+00	4.89E-07	6.44E-06	5.32E-07		7.46E-06	29%
6	222	1	Surface	Total PAH	1.77E-01	2.26E-07	2.76E-06	4.58E-09		2.99E-06	12%
6	222	1	Surface	Uranium	2.80E+01					0.00E+00	0%
6	222	1	Surface	Uranium-234	1.04E+01	5.14E-07		2.39E-08	1.20E-08	5.49E-07	2%
6	222	1	Surface	Uranium-235	7.10E-01	3.62E-08		1.45E-09	1.76E-06	1.80E-06	7%
6	222	1	Surface	Uranium-238	1.96E+01	1.29E-06		3.69E-08	1.02E-05	1.15E-05	44%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	**222**	**1**	**Surface**	**Totals**		**2.55E-06**	**9.20E-06**	**2.18E-06**	**1.20E-05**	**2.59E-05**	
6	**222**	**1**	**Surface**	**Percent**		**10%**	**36%**	**8%**	**46%**		
6	227	1	Surface	Beryllium	5.52E-01			5.23E-10		5.23E-10	0%
6	227	1	Surface	Cesium-137	1.90E-01	2.57E-09		4.56E-13	2.20E-06	2.21E-06	3%
6	227	1	Surface	Chromium	4.71E+01			1.56E-06		1.56E-06	2%
6	227	1	Surface	Cobalt-60	1.53E-02	1.93E-10		1.10E-13	8.66E-07	8.66E-07	1%
6	227	1	Surface	Neptunium-237	9.05E-01	4.58E-08		3.23E-09	3.29E-06	3.34E-06	5%
6	227	1	Surface	Nickel	2.03E+02			2.08E-08		2.08E-08	0%
6	227	1	Surface	PCB, Total	4.14E+00	1.45E-06	1.91E-05	1.57E-06		2.21E-05	33%
6	227	1	Surface	Technetium-99	4.77E+01	1.14E-07		1.36E-10	1.77E-08	1.32E-07	0%
6	227	1	Surface	Total PAH	3.38E-01	4.31E-07	5.27E-06	8.73E-09		5.71E-06	8%
6	227	1	Surface	Uranium	1.02E+02					0.00E+00	0%
6	227	1	Surface	Uranium-234	1.54E+01	7.62E-07		3.55E-08	1.78E-08	8.16E-07	1%
6	227	1	Surface	Uranium-235	1.49E+00	7.59E-08		3.03E-09	3.69E-06	3.77E-06	6%
6	227	1	Surface	Uranium-238	4.63E+01	3.04E-06		8.72E-08	2.41E-05	2.72E-05	40%
6	**227**	**1**	**Surface**	**Totals**		**5.92E-06**	**2.43E-05**	**3.30E-06**	**3.42E-05**	**6.77E-05**	
6	**227**	**1**	**Surface**	**Percent**		**9%**	**36%**	**5%**	**50%**		
6	227	2	Surface	Beryllium	5.32E-01			5.04E-10		5.04E-10	0%
6	227	2	Surface	Chromium	5.63E+01			1.87E-06		1.87E-06	5%
6	227	2	Surface	Cobalt	8.99E+00			3.19E-08		3.19E-08	0%
6	227	2	Surface	Cobalt-60	1.37E-02	1.73E-10		9.89E-14	7.76E-07	7.76E-07	2%
6	227	2	Surface	Mercury	8.41E+00					0.00E+00	0%
6	227	2	Surface	Nickel	1.25E+02			1.28E-08		1.28E-08	0%
6	227	2	Surface	PCB, Total	5.82E+00	2.03E-06	2.68E-05	2.21E-06		3.10E-05	85%
6	227	2	Surface	Total PAH	1.16E-01	1.48E-07	1.80E-06	2.99E-09		1.95E-06	5%
6	227	2	Surface	Uranium	1.51E+01					0.00E+00	0%
6	227	2	Surface	Uranium-238	1.57E+00	1.03E-07		2.97E-09	8.19E-07	9.25E-07	3%
6	**227**	**2**	**Surface**	**Totals**		**2.29E-06**	**2.86E-05**	**4.13E-06**	**1.59E-06**	**3.66E-05**	
6	**227**	**2**	**Surface**	**Percent**		**6%**	**78%**	**11%**	**4%**		
6	228	1	Surface	Antimony	6.30E-01					0.00E+00	0%
6	228	1	Surface	Cadmium	3.90E+00			2.77E-09		2.77E-09	0%
6	228	1	Surface	Chromium	1.89E+02			6.26E-06		6.26E-06	48%
6	228	1	Surface	Mercury	9.37E+00					0.00E+00	0%
6	228	1	Surface	Neptunium-237	8.00E-01	4.05E-08		2.85E-09	2.91E-06	2.95E-06	23%
6	228	1	Surface	Nickel	7.92E+01			8.12E-09		8.12E-09	0%
6	228	1	Surface	Silver	1.16E+01					0.00E+00	0%
6	228	1	Surface	Total PAH	6.69E-02	8.53E-08	1.04E-06	1.73E-09		1.13E-06	9%
6	228	1	Surface	Uranium	1.51E+01					0.00E+00	0%
6	228	1	Surface	Uranium-235	1.78E-01	9.07E-09		3.62E-10	4.41E-07	4.51E-07	3%
6	228	1	Surface	Uranium-238	3.77E+00	2.47E-07		7.11E-09	1.96E-06	2.22E-06	17%
6	**228**	**1**	**Surface**	**Totals**		**3.82E-07**	**1.04E-06**	**6.28E-06**	**5.31E-06**	**1.30E-05**	
6	**228**	**1**	**Surface**	**Percent**		**3%**	**8%**	**48%**	**41%**		
7	76	1	Surface	Barium	2.69E+02					0.00E+00	0%
7	76	1	Surface	PCB, Total	2.60E-01	9.09E-08	1.20E-06	9.88E-08		1.39E-06	4%
7	76	1	Surface	Total PAH	1.76E+00	2.24E-06	2.74E-05	4.54E-08		2.97E-05	93%
7	76	1	Surface	Uranium-238	1.45E+00	9.52E-08		2.73E-09	7.55E-07	8.53E-07	3%
7	**76**	**1**	**Surface**	**Totals**		**2.43E-06**	**2.86E-05**	**1.47E-07**	**7.55E-07**	**3.19E-05**	
7	**76**	**1**	**Surface**	**Percent**		**8%**	**90%**	**0%**	**2%**		
7	165	1	Surface	Antimony	2.20E+00					0.00E+00	0%
7	165	1	Surface	Arsenic	6.35E+01	1.66E-05	4.69E-05	1.08E-07		6.37E-05	28%
7	165	1	Surface	Barium	5.84E+02					0.00E+00	0%
7	165	1	Surface	Beryllium	6.82E-01			6.46E-10		6.46E-10	0%
7	165	1	Surface	Cesium-137	3.47E+00	4.70E-08		8.33E-12	4.03E-05	4.03E-05	18%
7	165	1	Surface	Chromium	3.74E+01			1.24E-06		1.24E-06	1%
7	165	1	Surface	Mercury	3.78E-01					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
7	165	1	Surface	Naphthalene	1.61E+00			7.20E-07		7.20E-07	0%
7	165	1	Surface	Neptunium-237	4.26E-01	2.16E-08		1.52E-09	1.55E-06	1.57E-06	1%
7	165	1	Surface	Nickel	3.47E+01			3.56E-09		3.56E-09	0%
7	165	1	Surface	PCB, Total	8.27E+00	2.89E-06	3.80E-05	3.14E-06		4.41E-05	19%
7	165	1	Surface	Plutonium-239/240	2.81E+00	2.42E-07		1.88E-08	2.56E-09	2.63E-07	0%
7	165	1	Surface	Silver	3.09E+01					0.00E+00	0%
7	165	1	Surface	Thorium-230	6.02E+00	3.80E-07		3.46E-08	2.25E-08	4.37E-07	0%
7	165	1	Surface	Total PAH	1.87E+00	2.38E-06	2.91E-05	4.83E-08		3.16E-05	14%
7	165	1	Surface	Uranium	1.08E+02					0.00E+00	0%
7	165	1	Surface	Uranium-234	5.76E+01	2.84E-06		1.32E-07	6.62E-08	3.04E-06	1%
7	165	1	Surface	Uranium-235	2.05E+00	1.04E-07		4.16E-09	5.07E-06	5.18E-06	2%
7	165	1	Surface	Uranium-238	6.41E+01	4.21E-06		1.21E-07	3.34E-05	3.77E-05	16%
7	**165**	**1**	**Surface**	**Totals**		**2.98E-05**	**1.14E-04**	**5.57E-06**	**8.03E-05**	**2.30E-04**	
7	**165**	**1**	**Surface**	**Percent**		**13%**	**50%**	**2%**	**35%**		
7	170	1	Surface	Neptunium-237	1.15E-01	5.82E-09		4.10E-10	4.18E-07	4.24E-07	32%
7	170	1	Surface	Uranium-238	1.53E+00	1.00E-07		2.88E-09	7.96E-07	9.00E-07	68%
7	**170**	**1**	**Surface**	**Totals**		**1.06E-07**		**3.29E-09**	**1.21E-06**	**1.32E-06**	
7	**170**	**1**	**Surface**	**Percent**		**8%**		**0%**	**92%**		
8	158	1	Surface	Antimony	5.23E-01					0.00E+00	0%
8	158	1	Surface	Arsenic	1.01E+01	2.65E-06	7.48E-06	1.72E-08		1.01E-05	48%
8	158	1	Surface	Barium	2.19E+02					0.00E+00	0%
8	158	1	Surface	Chromium	6.07E+01			2.01E-06		2.01E-06	10%
8	158	1	Surface	Cobalt	1.62E+01			5.76E-08		5.76E-08	0%
8	158	1	Surface	Manganese	9.91E+02					0.00E+00	0%
8	158	1	Surface	Mercury	1.05E+01					0.00E+00	0%
8	158	1	Surface	Nickel	7.28E+01			7.47E-09		7.47E-09	0%
8	158	1	Surface	Thallium	3.12E-01					0.00E+00	0%
8	158	1	Surface	Total PAH	3.69E-01	4.71E-07	5.75E-06	9.53E-09		6.23E-06	30%
8	158	1	Surface	Uranium	2.03E+01					0.00E+00	0%
8	158	1	Surface	Uranium-235	1.63E-01	8.30E-09		3.32E-10	4.04E-07	4.13E-07	2%
8	158	1	Surface	Uranium-238	3.79E+00	2.49E-07		7.14E-09	1.97E-06	2.23E-06	11%
8	**158**	**1**	**Surface**	**Totals**		**3.38E-06**	**1.32E-05**	**2.11E-06**	**2.38E-06**	**2.11E-05**	
8	**158**	**1**	**Surface**	**Percent**		**16%**	**63%**	**10%**	**11%**		
8	169	1	Surface	Aluminum	1.42E+04					0.00E+00	0%
8	169	1	Surface	Antimony	1.30E+00					0.00E+00	0%
8	169	1	Surface	Arsenic	2.03E+01	5.32E-06	1.50E-05	3.46E-08		2.04E-05	12%
8	169	1	Surface	Beryllium	8.00E-01			7.58E-10		7.58E-10	0%
8	169	1	Surface	Chromium	2.15E+02			7.12E-06		7.12E-06	4%
8	169	1	Surface	Copper	3.74E+02					0.00E+00	0%
8	169	1	Surface	Iron	4.16E+04					0.00E+00	0%
8	169	1	Surface	Mercury	7.87E+00					0.00E+00	0%
8	169	1	Surface	Nickel	5.49E+02			5.63E-08		5.63E-08	0%
8	169	1	Surface	PCB, Total	1.00E+01	3.49E-06	4.60E-05	3.80E-06		5.33E-05	32%
8	169	1	Surface	Thallium	4.60E-01					0.00E+00	0%
8	169	1	Surface	Total PAH	4.59E+00	5.85E-06	7.15E-05	1.18E-07		7.74E-05	47%
8	169	1	Surface	Uranium	5.03E+01					0.00E+00	0%
8	169	1	Surface	Uranium-234	6.55E+00	3.23E-07		1.51E-08	7.54E-09	3.46E-07	0%
8	169	1	Surface	Uranium-235	4.60E-01	2.34E-08		9.37E-10	1.14E-06	1.16E-06	1%
8	169	1	Surface	Uranium-238	8.12E+00	5.33E-07		1.53E-08	4.23E-06	4.78E-06	3%
8	**169**	**1**	**Surface**	**Totals**		**1.55E-05**	**1.32E-04**	**1.12E-05**	**5.37E-06**	**1.65E-04**	
8	**169**	**1**	**Surface**	**Percent**		**9%**	**81%**	**7%**	**3%**		
9	19	1	Surface	Beryllium	1.10E+00			1.04E-09		1.04E-09	0%
9	19	1	Surface	Cadmium	1.20E+00			8.52E-10		8.52E-10	0%
9	19	1	Surface	Thallium	9.80E-01					0.00E+00	0%
9	19	1	Surface	Total PAH	5.23E+00	6.67E-06	8.15E-05	1.35E-07		8.83E-05	100%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**19**	**1**	**Surface**	**Totals**		**6.67E-06**	**8.15E-05**	**1.37E-07**		**8.83E-05**	
9	**19**	**1**	**Surface**	**Percent**		**8%**	**92%**	**0%**			
9	138	1	Surface	Antimony	5.39E+00					0.00E+00	0%
9	138	1	Surface	Arsenic	1.06E+01	2.78E-06	7.85E-06	1.81E-08		1.07E-05	64%
9	138	1	Surface	Cadmium	5.42E+00			3.85E-09		3.85E-09	0%
9	138	1	Surface	Chromium	5.39E+01			1.78E-06		1.78E-06	11%
9	138	1	Surface	Mercury	1.30E+01					0.00E+00	0%
9	138	1	Surface	Nickel	7.04E+01			7.22E-09		7.22E-09	0%
9	138	1	Surface	PCB, Total	5.00E-01	1.75E-07	2.30E-06	1.90E-07		2.66E-06	16%
9	138	1	Surface	Silver	1.01E+01					0.00E+00	0%
9	138	1	Surface	Total PAH	9.74E-02	1.24E-07	1.52E-06	2.52E-09		1.65E-06	10%
9	**138**	**1**	**Surface**	**Totals**		**3.08E-06**	**1.17E-05**	**2.01E-06**		**1.68E-05**	
9	**138**	**1**	**Surface**	**Percent**		**18%**	**70%**	**12%**			
9	138	2	Surface	Nickel	7.99E+01			8.19E-09		8.19E-09	1%
9	138	2	Surface	PCB, Total	9.20E-02	3.21E-08	4.23E-07	3.50E-08		4.90E-07	43%
9	138	2	Surface	Silver	1.04E+01					0.00E+00	0%
9	138	2	Surface	Total PAH	3.84E-02	4.90E-08	5.99E-07	9.92E-10		6.49E-07	57%
9	**138**	**2**	**Surface**	**Totals**		**8.11E-08**	**1.02E-06**	**4.41E-08**		**1.15E-06**	
9	**138**	**2**	**Surface**	**Percent**		**7%**	**89%**	**4%**			
9	180	1	Surface	Antimony	5.80E-01					0.00E+00	0%
9	180	1	Surface	Arsenic	7.48E+01	1.96E-05	5.53E-05	1.27E-07		7.50E-05	98%
9	180	1	Surface	Chromium	5.54E+01			1.84E-06		1.84E-06	2%
9	180	1	Surface	Mercury	8.28E+00					0.00E+00	0%
9	180	1	Surface	Nickel	8.77E+01			8.99E-09		8.99E-09	0%
9	**180**	**1**	**Surface**	**Totals**		**1.96E-05**	**5.53E-05**	**1.97E-06**		**7.69E-05**	
9	**180**	**1**	**Surface**	**Percent**		**26%**	**72%**	**3%**			
9	180	2	Surface	Antimony	4.58E-01					0.00E+00	0%
9	180	2	Surface	Arsenic	1.27E+01	3.32E-06	9.35E-06	2.15E-08		1.27E-05	81%
9	180	2	Surface	Chromium	4.46E+01			1.48E-06		1.48E-06	9%
9	180	2	Surface	Nickel	8.42E+01			8.63E-09		8.63E-09	0%
9	180	2	Surface	Total PAH	9.19E-02	1.17E-07	1.43E-06	2.37E-09		1.55E-06	10%
9	**180**	**2**	**Surface**	**Totals**		**3.43E-06**	**1.08E-05**	**1.51E-06**		**1.57E-05**	
9	**180**	**2**	**Surface**	**Percent**		**22%**	**69%**	**10%**			
9	180	3	Surface	Arsenic	1.34E+01	3.50E-06	9.87E-06	2.27E-08		1.34E-05	90%
9	180	3	Surface	Chromium	4.69E+01			1.56E-06		1.56E-06	10%
9	180	3	Surface	Nickel	6.77E+01			6.95E-09		6.95E-09	0%
9	180	3	Surface	Silver	1.14E+01					0.00E+00	0%
9	**180**	**3**	**Surface**	**Totals**		**3.50E-06**	**9.87E-06**	**1.59E-06**		**1.50E-05**	
9	**180**	**3**	**Surface**	**Percent**		**23%**	**66%**	**11%**			
9	180	4	Surface	Arsenic	1.15E+01	3.02E-06	8.52E-06	1.96E-08		1.16E-05	83%
9	180	4	Surface	Barium	2.13E+02					0.00E+00	0%
9	180	4	Surface	Beryllium	1.60E+00			1.52E-09		1.52E-09	0%
9	180	4	Surface	Chromium	6.00E+01			1.99E-06		1.99E-06	14%
9	180	4	Surface	Iron	1.54E+04					0.00E+00	0%
9	180	4	Surface	Manganese	7.09E+02					0.00E+00	0%
9	180	4	Surface	Nickel	6.46E+01			6.63E-09		6.63E-09	0%
9	180	4	Surface	Silver	9.68E+00					0.00E+00	0%
9	180	4	Surface	Total PAH	2.15E-02	2.74E-08	3.35E-07	5.56E-10		3.63E-07	3%
9	180	4	Surface	Vanadium	4.85E+01					0.00E+00	0%
9	**180**	**4**	**Surface**	**Totals**		**3.05E-06**	**8.86E-06**	**2.02E-06**		**1.39E-05**	
9	**180**	**4**	**Surface**	**Percent**		**22%**	**64%**	**14%**			
9	181	1	Surface	Chromium	2.29E+01			7.57E-07		7.57E-07	57%
9	181	1	Surface	Thallium	3.50E+00					0.00E+00	0%
9	181	1	Surface	Total PAH	3.43E-02	4.38E-08	5.35E-07	8.86E-10		5.79E-07	43%
9	**181**	**1**	**Surface**	**Totals**		**4.38E-08**	**5.35E-07**	**7.58E-07**		**1.34E-06**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**181**	**1**	**Surface**	**Percent**		**3%**	**40%**	**57%**			
9	195	1	Surface	Chromium	6.33E+01			2.10E-06		2.10E-06	100%
9	195	1	Surface	Nickel	7.02E+01			7.20E-09		7.20E-09	0%
9	195	1	Surface	Silver	9.37E+00					0.00E+00	0%
9	**195**	**1**	**Surface**	**Totals**				**2.10E-06**		**2.10E-06**	
9	**195**	**1**	**Surface**	**Percent**				**100%**			
9	195	2	Surface	Chromium	4.52E+01			1.50E-06		1.50E-06	77%
9	195	2	Surface	Silver	9.48E+00					0.00E+00	0%
9	195	2	Surface	Total PAH	2.68E-02	3.42E-08	4.18E-07	6.92E-10		4.53E-07	23%
9	**195**	**2**	**Surface**	**Totals**		**3.42E-08**	**4.18E-07**	**1.50E-06**		**1.95E-06**	
9	**195**	**2**	**Surface**	**Percent**		**2%**	**21%**	**77%**			
9	195	3	Surface	Chromium	5.03E+01			1.67E-06		1.67E-06	71%
9	195	3	Surface	Nickel	5.22E+01			5.35E-09		5.35E-09	0%
9	195	3	Surface	Total PAH	4.06E-02	5.18E-08	6.33E-07	1.05E-09		6.86E-07	29%
9	**195**	**3**	**Surface**	**Totals**		**5.18E-08**	**6.33E-07**	**1.67E-06**		**2.36E-06**	
9	**195**	**3**	**Surface**	**Percent**		**2%**	**27%**	**71%**			
9	195	4	Surface	Chromium	5.29E+01			1.75E-06		1.75E-06	100%
9	195	4	Surface	Nickel	6.23E+01			6.39E-09		6.39E-09	0%
9	**195**	**4**	**Surface**	**Totals**				**1.76E-06**		**1.76E-06**	
9	**195**	**4**	**Surface**	**Percent**				**100%**			
9	195	5	Surface	Chromium	5.74E+01			1.90E-06		1.90E-06	82%
9	195	5	Surface	Nickel	8.11E+01			8.32E-09		8.32E-09	0%
9	195	5	Surface	Total PAH	2.40E-02	3.06E-08	3.74E-07	6.20E-10		4.05E-07	17%
9	**195**	**5**	**Surface**	**Totals**		**3.06E-08**	**3.74E-07**	**1.91E-06**		**2.32E-06**	
9	**195**	**5**	**Surface**	**Percent**		**1%**	**16%**	**83%**			
9	195	6	Surface	Chromium	4.45E+01			1.48E-06		1.48E-06	26%
9	195	6	Surface	Nickel	8.71E+01			8.94E-09		8.94E-09	0%
9	195	6	Surface	Total PAH	2.48E-01	3.16E-07	3.86E-06	6.40E-09		4.18E-06	74%
9	**195**	**6**	**Surface**	**Totals**		**3.16E-07**	**3.86E-06**	**1.49E-06**		**5.67E-06**	
9	**195**	**6**	**Surface**	**Percent**		**6%**	**68%**	**26%**			
9	195	7	Surface	Chromium	4.93E+01			1.63E-06		1.63E-06	100%
9	195	7	Surface	Silver	8.06E+00					0.00E+00	0%
9	**195**	**7**	**Surface**	**Totals**				**1.63E-06**		**1.63E-06**	
9	**195**	**7**	**Surface**	**Percent**				**100%**			
9	195	8	Surface	Arsenic	1.16E+01	3.03E-06	8.54E-06	1.97E-08		1.16E-05	66%
9	195	8	Surface	Beryllium	7.40E-01			7.01E-10		7.01E-10	0%
9	195	8	Surface	Chromium	6.79E+01			2.25E-06		2.25E-06	13%
9	195	8	Surface	Cobalt	1.82E+01			6.46E-08		6.46E-08	0%
9	195	8	Surface	Nickel	7.01E+01			7.19E-09		7.19E-09	0%
9	195	8	Surface	Total PAH	2.16E-01	2.75E-07	3.36E-06	5.57E-09		3.64E-06	21%
9	195	8	Surface	Vanadium	4.04E+01					0.00E+00	0%
9	**195**	**8**	**Surface**	**Totals**		**3.30E-06**	**1.19E-05**	**2.35E-06**		**1.76E-05**	
9	**195**	**8**	**Surface**	**Percent**		**19%**	**68%**	**13%**			
9	195	9	Surface	Chromium	6.08E+01			2.02E-06		2.02E-06	100%
9	195	9	Surface	Nickel	7.93E+01			8.13E-09		8.13E-09	0%
9	**195**	**9**	**Surface**	**Totals**				**2.02E-06**		**2.02E-06**	
9	**195**	**9**	**Surface**	**Percent**				**100%**			
9	195	10	Surface	Chromium	4.51E+01			1.49E-06		1.49E-06	99%
9	195	10	Surface	Nickel	7.40E+01			7.59E-09		7.59E-09	1%
9	195	10	Surface	Silver	1.31E+01					0.00E+00	0%
9	**195**	**10**	**Surface**	**Totals**				**1.50E-06**		**1.50E-06**	
9	**195**	**10**	**Surface**	**Percent**				**100%**			
9	195	11	Surface	Aluminum	2.81E+04					0.00E+00	0%
9	195	11	Surface	Arsenic	1.35E+01	3.53E-06	9.95E-06	2.29E-08		1.35E-05	88%
9	195	11	Surface	Barium	4.53E+02					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	195	11	Surface	Chromium	5.05E+01			1.67E-06		1.67E-06	11%
9	195	11	Surface	Cobalt	2.77E+01			9.84E-08		9.84E-08	1%
9	195	11	Surface	Iron	1.97E+04					0.00E+00	0%
9	195	11	Surface	Nickel	6.77E+01			6.94E-09		6.94E-09	0%
9	195	11	Surface	Thallium	6.60E-01					0.00E+00	0%
9	195	11	Surface	Vanadium	7.97E+01					0.00E+00	0%
9	**195**	**11**	**Surface**	**Totals**		**3.53E-06**	**9.95E-06**	**1.80E-06**		**1.53E-05**	
9	**195**	**11**	**Surface**	**Percent**		**23%**	**65%**	**12%**			
9	195	12	Surface	Beryllium	7.50E-01			7.10E-10		7.10E-10	0%
9	195	12	Surface	Chromium	7.04E+01			2.33E-06		2.33E-06	100%
9	195	12	Surface	Nickel	6.78E+01			6.95E-09		6.95E-09	0%
9	**195**	**12**	**Surface**	**Totals**				**2.34E-06**		**2.34E-06**	
9	**195**	**12**	**Surface**	**Percent**				**100%**			
9	195	13	Surface	Chromium	6.55E+01			2.17E-06		2.17E-06	100%
9	195	13	Surface	Nickel	6.91E+01			7.09E-09		7.09E-09	0%
9	**195**	**13**	**Surface**	**Totals**				**2.18E-06**		**2.18E-06**	
9	**195**	**13**	**Surface**	**Percent**				**100%**			
9	195	14	Surface	Chromium	5.94E+01			1.97E-06		1.97E-06	100%
9	195	14	Surface	Nickel	7.04E+01			7.22E-09		7.22E-09	0%
9	**195**	**14**	**Surface**	**Totals**				**1.98E-06**		**1.98E-06**	
9	**195**	**14**	**Surface**	**Percent**				**100%**			
9	195	15	Surface	Chromium	4.82E+01			1.60E-06		1.60E-06	100%
9	**195**	**15**	**Surface**	**Totals**				**1.60E-06**		**1.60E-06**	
9	**195**	**15**	**Surface**	**Percent**				**100%**			
9	195	16	Surface	Chromium	4.45E+01			1.47E-06		1.47E-06	99%
9	195	16	Surface	Nickel	8.16E+01			8.37E-09		8.37E-09	1%
9	**195**	**16**	**Surface**	**Totals**				**1.48E-06**		**1.48E-06**	
9	**195**	**16**	**Surface**	**Percent**				**100%**			
9	195	17	Surface	Chromium	8.22E+01			2.72E-06		2.72E-06	20%
9	195	17	Surface	Mercury	4.17E-01					0.00E+00	0%
9	195	17	Surface	Nickel	5.93E+01			6.09E-09		6.09E-09	0%
9	195	17	Surface	PCB, Total	7.40E-01	2.59E-07	3.40E-06	2.81E-07		3.94E-06	29%
9	195	17	Surface	Silver	1.01E+01					0.00E+00	0%
9	195	17	Surface	Thallium	5.40E-01					0.00E+00	0%
9	195	17	Surface	Total PAH	3.16E-01	4.03E-07	4.92E-06	8.16E-09		5.33E-06	39%
9	195	17	Surface	Uranium-235	1.32E-01	6.72E-09		2.69E-10	3.27E-07	3.34E-07	2%
9	195	17	Surface	Uranium-238	2.48E+00	1.63E-07		4.68E-09	1.29E-06	1.46E-06	11%
9	**195**	**17**	**Surface**	**Totals**		**8.31E-07**	**8.33E-06**	**3.02E-06**	**1.62E-06**	**1.38E-05**	
9	**195**	**17**	**Surface**	**Percent**		**6%**	**60%**	**22%**	**12%**		
9	486	1	Surface	Cesium-137	1.71E+00	2.31E-08		4.10E-12	1.98E-05	1.99E-05	100%
9	**486**	**1**	**Surface**	**Totals**		**2.31E-08**		**4.10E-12**	**1.98E-05**	**1.99E-05**	
9	**486**	**1**	**Surface**	**Percent**		**0%**		**0%**	**100%**		
9	487	1	Surface	Cesium-137	1.38E+00	1.87E-08		3.31E-12	1.60E-05	1.60E-05	100%
9	**487**	**1**	**Surface**	**Totals**		**1.87E-08**		**3.31E-12**	**1.60E-05**	**1.60E-05**	
9	**487**	**1**	**Surface**	**Percent**		**0%**		**0%**	**100%**		
9	492	1	Surface	Arsenic	1.47E+01	3.85E-06	1.09E-05	2.50E-08		1.47E-05	3%
9	492	1	Surface	Beryllium	1.04E+01			9.85E-09		9.85E-09	0%
9	492	1	Surface	Cadmium	3.14E+00			2.23E-09		2.23E-09	0%
9	492	1	Surface	Chromium	1.04E+03			3.45E-05		3.45E-05	7%
9	492	1	Surface	Cobalt-60	9.63E-03	1.21E-10		6.95E-14	5.45E-07	5.45E-07	0%
9	492	1	Surface	Neptunium-237	2.09E-01	1.06E-08		7.46E-10	7.60E-07	7.71E-07	0%
9	492	1	Surface	PCB, Total	4.41E+01	1.54E-05	2.03E-04	1.68E-05		2.35E-04	44%
9	492	1	Surface	Uranium	1.77E+03					0.00E+00	0%
9	492	1	Surface	Uranium-234	5.39E+01	2.66E-06		1.24E-07	6.20E-08	2.85E-06	1%
9	492	1	Surface	Uranium-235	5.72E+00	2.91E-07		1.16E-08	1.42E-05	1.45E-05	3%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	492	1	Surface	Uranium-238	3.83E+02	2.51E-05		7.22E-07	1.99E-04	2.25E-04	43%
9	492	1	Surface	Vanadium	4.32E+01					0.00E+00	0%
9	**492**	**1**	**Surface**	**Totals**		**4.74E-05**	**2.14E-04**	**5.21E-05**	**2.15E-04**	**5.28E-04**	
9	**492**	**1**	**Surface**	**Percent**		**9%**	**40%**	**10%**	**41%**		
9	493	1	Surface	Aluminum	1.44E+04					0.00E+00	0%
9	493	1	Surface	Barium	4.04E+02					0.00E+00	0%
9	493	1	Surface	Beryllium	9.91E-01			9.38E-10		9.38E-10	0%
9	493	1	Surface	Chromium	6.61E+01			2.19E-06		2.19E-06	13%
9	493	1	Surface	Cobalt	3.79E+01			1.35E-07		1.35E-07	1%
9	493	1	Surface	Cobalt-60	1.36E-02	1.71E-10		9.82E-14	7.70E-07	7.70E-07	5%
9	493	1	Surface	Manganese	3.55E+03					0.00E+00	0%
9	493	1	Surface	Mercury	2.60E-01					0.00E+00	0%
9	493	1	Surface	Neptunium-237	1.22E-01	6.18E-09		4.35E-10	4.43E-07	4.50E-07	3%
9	493	1	Surface	Nickel	2.13E+02			2.18E-08		2.18E-08	0%
9	493	1	Surface	PCB, Total	2.60E-01	9.09E-08	1.20E-06	9.88E-08		1.39E-06	8%
9	493	1	Surface	Total PAH	5.00E-01	6.38E-07	7.79E-06	1.29E-08		8.44E-06	50%
9	493	1	Surface	Uranium-235	1.65E-01	8.40E-09		3.36E-10	4.09E-07	4.18E-07	2%
9	493	1	Surface	Uranium-238	5.50E+00	3.61E-07		1.04E-08	2.86E-06	3.23E-06	19%
9	493	1	Surface	Vanadium	4.05E+01					0.00E+00	0%
9	**493**	**1**	**Surface**	**Totals**		**1.10E-06**	**8.99E-06**	**2.47E-06**	**4.49E-06**	**1.70E-05**	
9	**493**	**1**	**Surface**	**Percent**		**6%**	**53%**	**14%**	**26%**		
9	517	1	Surface	Beryllium	7.39E-01			7.00E-10		7.00E-10	0%
9	517	1	Surface	Chromium	4.91E+01			1.63E-06		1.63E-06	14%
9	517	1	Surface	Cobalt-60	6.39E-03	8.05E-11		4.61E-14	3.62E-07	3.62E-07	3%
9	517	1	Surface	Neptunium-237	1.07E+00	5.42E-08		3.82E-09	3.89E-06	3.95E-06	35%
9	517	1	Surface	Nickel	1.72E+02			1.76E-08		1.76E-08	0%
9	517	1	Surface	PCB, Total	5.00E-01	1.75E-07	2.30E-06	1.90E-07		2.66E-06	24%
9	517	1	Surface	Uranium-235	1.60E-01	8.15E-09		3.26E-10	3.97E-07	4.05E-07	4%
9	517	1	Surface	Uranium-238	3.89E+00	2.55E-07		7.33E-09	2.02E-06	2.29E-06	20%
9	**517**	**1**	**Surface**	**Totals**		**4.92E-07**	**2.30E-06**	**1.85E-06**	**6.67E-06**	**1.13E-05**	
9	**517**	**1**	**Surface**	**Percent**		**4%**	**20%**	**16%**	**59%**		
9	541	1	Surface	Aluminum	1.43E+04					0.00E+00	0%
9	541	1	Surface	Americium-241	7.53E+00	5.11E-07		4.27E-08	9.49E-07	1.50E-06	0%
9	541	1	Surface	Barium	1.28E+02					0.00E+00	0%
9	541	1	Surface	Beryllium	6.98E-01			6.61E-10		6.61E-10	0%
9	541	1	Surface	Cadmium	1.68E+00			1.19E-09		1.19E-09	0%
9	541	1	Surface	Cesium-137	9.58E-01	1.30E-08		2.30E-12	1.11E-05	1.11E-05	1%
9	541	1	Surface	Chromium	8.24E+02			2.73E-05		2.73E-05	3%
9	541	1	Surface	Cobalt-60	1.01E-02	1.27E-10		7.29E-14	5.72E-07	5.72E-07	0%
9	541	1	Surface	Iron	1.60E+04					0.00E+00	0%
9	541	1	Surface	Mercury	9.81E-02					0.00E+00	0%
9	541	1	Surface	Naphthalene	6.55E-01			2.93E-07		2.93E-07	0%
9	541	1	Surface	Neptunium-237	5.52E-02	2.79E-09		1.97E-10	2.01E-07	2.04E-07	0%
9	541	1	Surface	Nickel	1.52E+01			1.56E-09		1.56E-09	0%
9	541	1	Surface	PCB, Total	6.06E+01	2.12E-05	2.79E-04	2.30E-05		3.23E-04	31%
9	541	1	Surface	Total PAH	2.33E+00	2.97E-06	3.63E-05	6.02E-08		3.93E-05	4%
9	541	1	Surface	Uranium	6.38E+03					0.00E+00	0%
9	541	1	Surface	Uranium-234	1.43E+02	7.06E-06		3.28E-07	1.64E-07	7.55E-06	1%
9	541	1	Surface	Uranium-235	1.76E+01	8.94E-07		3.58E-08	4.35E-05	4.45E-05	4%
9	541	1	Surface	Uranium-238	1.00E+03	6.57E-05		1.89E-06	5.21E-04	5.89E-04	56%
9	541	1	Surface	Vanadium	3.04E+01					0.00E+00	0%
9	**541**	**1**	**Surface**	**Totals**		**9.83E-05**	**3.15E-04**	**5.30E-05**	**5.78E-04**	**1.04E-03**	
9	**541**	**1**	**Surface**	**Percent**		**9%**	**30%**	**5%**	**55%**		
9	561	1	Surface	Antimony	9.36E-01					0.00E+00	0%
9	561	1	Surface	Arsenic	1.66E+01	4.34E-06	1.22E-05	2.82E-08		1.66E-05	16%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	561	1	Surface	Barium	1.40E+02					0.00E+00	0%
9	561	1	Surface	Beryllium	6.85E-01			6.49E-10		6.49E-10	0%
9	561	1	Surface	Chromium	8.58E+01			2.84E-06		2.84E-06	3%
9	561	1	Surface	Cobalt	1.07E+01			3.80E-08		3.80E-08	0%
9	561	1	Surface	Cobalt-60	7.06E-02	8.89E-10		5.10E-13	4.00E-06	4.00E-06	4%
9	561	1	Surface	Iron	2.05E+04					0.00E+00	0%
9	561	1	Surface	Manganese	1.61E+03					0.00E+00	0%
9	561	1	Surface	Neptunium-237	2.71E-02	1.37E-09		9.67E-11	9.85E-08	1.00E-07	0%
9	561	1	Surface	PCB, Total	1.04E+00	3.64E-07	4.79E-06	3.96E-07		5.55E-06	5%
9	561	1	Surface	Thallium	3.33E-01					0.00E+00	0%
9	561	1	Surface	Total PAH	3.94E-01	5.03E-07	6.14E-06	1.02E-08		6.65E-06	7%
9	561	1	Surface	Uranium	2.65E+02					0.00E+00	0%
9	561	1	Surface	Uranium-234	7.84E+00	3.87E-07		1.80E-08	9.02E-09	4.14E-07	0%
9	561	1	Surface	Uranium-235	1.37E+00	6.96E-08		2.78E-09	3.39E-06	3.46E-06	3%
9	561	1	Surface	Uranium-238	1.07E+02	6.99E-06		2.01E-07	5.54E-05	6.26E-05	61%
9	561	1	Surface	Vanadium	3.76E+01					0.00E+00	0%
9	**561**	**1**	**Surface**	**Totals**		**1.27E-05**	**2.32E-05**	**3.54E-06**	**6.29E-05**	**1.02E-04**	
9	**561**	**1**	**Surface**	**Percent**		**12%**	**23%**	**3%**	**62%**		
9	561	2	Surface	Antimony	5.33E+00					0.00E+00	0%
9	561	2	Surface	Arsenic	1.30E+01	3.41E-06	9.62E-06	2.21E-08		1.30E-05	3%
9	561	2	Surface	Beryllium	6.34E-01			6.00E-10		6.00E-10	0%
9	561	2	Surface	Cadmium	4.13E-01			2.93E-10		2.93E-10	0%
9	561	2	Surface	Cesium-137	4.09E-01	5.53E-09		9.81E-13	4.74E-06	4.75E-06	1%
9	561	2	Surface	Chromium	2.88E+02			9.55E-06		9.55E-06	2%
9	561	2	Surface	Cobalt	1.14E+01			4.05E-08		4.05E-08	0%
9	561	2	Surface	Cobalt-60	2.76E-02	3.48E-10		1.99E-13	1.56E-06	1.56E-06	0%
9	561	2	Surface	Manganese	1.12E+03					0.00E+00	0%
9	561	2	Surface	Neptunium-237	4.71E-02	2.38E-09		1.68E-10	1.71E-07	1.74E-07	0%
9	561	2	Surface	PCB, Total	1.64E+01	5.74E-06	7.55E-05	6.24E-06		8.75E-05	21%
9	561	2	Surface	Thallium	4.09E-01					0.00E+00	0%
9	561	2	Surface	Total PAH	2.43E+00	3.10E-06	3.79E-05	6.28E-08		4.10E-05	10%
9	561	2	Surface	Uranium	1.38E+03					0.00E+00	0%
9	561	2	Surface	Uranium-234	4.06E+01	2.01E-06		9.34E-08	4.68E-08	2.15E-06	1%
9	561	2	Surface	Uranium-235	7.09E+00	3.61E-07		1.44E-08	1.76E-05	1.80E-05	4%
9	561	2	Surface	Uranium-238	4.00E+02	2.63E-05		7.55E-07	2.08E-04	2.35E-04	57%
9	561	2	Surface	Vanadium	3.46E+01					0.00E+00	0%
9	**561**	**2**	**Surface**	**Totals**		**4.09E-05**	**1.23E-04**	**1.68E-05**	**2.32E-04**	**4.13E-04**	
9	**561**	**2**	**Surface**	**Percent**		**10%**	**30%**	**4%**	**56%**		
9	562	1	Surface	Uranium	8.73E+01					0.00E+00	0%
9	562	1	Surface	Uranium-238	2.73E+00	1.79E-07		5.15E-09	1.42E-06	1.61E-06	100%
9	**562**	**1**	**Surface**	**Totals**		**1.79E-07**		**5.15E-09**	**1.42E-06**	**1.61E-06**	
9	**562**	**1**	**Surface**	**Percent**		**11%**		**0%**	**89%**		
9	562	2	Surface	PCB, Total	1.58E+00	5.52E-07	7.27E-06	6.01E-07		8.42E-06	2%
9	562	2	Surface	Uranium-234	5.34E+01	2.64E-06		1.23E-07	6.14E-08	2.82E-06	1%
9	562	2	Surface	Uranium-235	8.96E+00	4.56E-07		1.82E-08	2.22E-05	2.27E-05	6%
9	562	2	Surface	Uranium-238	5.81E+02	3.81E-05		1.10E-06	3.02E-04	3.42E-04	91%
9	**562**	**2**	**Surface**	**Totals**		**4.18E-05**	**7.27E-06**	**1.84E-06**	**3.25E-04**	**3.76E-04**	
9	**562**	**2**	**Surface**	**Percent**		**11%**	**2%**	**0%**	**86%**		
9	562	3	Surface	Chromium	3.82E+01			1.26E-06		1.26E-06	10%
9	562	3	Surface	PCB, Total	2.40E-01	8.39E-08	1.10E-06	9.12E-08		1.28E-06	10%
9	562	3	Surface	Total PAH	2.20E-01	2.81E-07	3.43E-06	5.68E-09		3.72E-06	28%
9	562	3	Surface	Uranium	5.89E+01					0.00E+00	0%
9	562	3	Surface	Uranium-235	1.63E-01	8.30E-09		3.32E-10	4.04E-07	4.13E-07	3%
9	562	3	Surface	Uranium-238	1.09E+01	7.15E-07		2.05E-08	5.67E-06	6.41E-06	49%
9	**562**	**3**	**Surface**	**Totals**		**1.09E-06**	**4.53E-06**	**1.38E-06**	**6.08E-06**	**1.31E-05**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**562**	**3**	**Surface**	**Percent**		**8%**	**35%**	**11%**	**46%**		
9	562	4	Surface	Chromium	4.67E+01			1.55E-06		1.55E-06	54%
9	562	4	Surface	Uranium	2.10E+01					0.00E+00	0%
9	562	4	Surface	Uranium-238	2.24E+00	1.47E-07		4.22E-09	1.17E-06	1.32E-06	46%
9	**562**	**4**	**Surface**	**Totals**		**1.47E-07**		**1.55E-06**	**1.17E-06**	**2.86E-06**	
9	**562**	**4**	**Surface**	**Percent**		**5%**		**54%**	**41%**		
9	562	5	Surface	Chromium	1.53E+02			5.07E-06		5.07E-06	10%
9	562	5	Surface	PCB, Total	9.50E-01	3.32E-07	4.37E-06	3.61E-07		5.06E-06	10%
9	562	5	Surface	Total PAH	7.05E-02	8.99E-08	1.10E-06	1.82E-09		1.19E-06	2%
9	562	5	Surface	Uranium	2.08E+02					0.00E+00	0%
9	562	5	Surface	Uranium-234	8.57E+00	4.23E-07		1.97E-08	9.86E-09	4.53E-07	1%
9	562	5	Surface	Uranium-235	9.50E-01	4.84E-08		1.93E-09	2.36E-06	2.41E-06	5%
9	562	5	Surface	Uranium-238	6.24E+01	4.10E-06		1.18E-07	3.25E-05	3.67E-05	72%
9	**562**	**5**	**Surface**	**Totals**		**4.99E-06**	**5.47E-06**	**5.58E-06**	**3.48E-05**	**5.09E-05**	
9	**562**	**5**	**Surface**	**Percent**		**10%**	**11%**	**11%**	**68%**		
9	562	6	Surface	Uranium-234	4.01E+01	1.98E-06		9.22E-08	4.61E-08	2.12E-06	1%
9	562	6	Surface	Uranium-235	6.81E+00	3.47E-07		1.39E-08	1.69E-05	1.72E-05	7%
9	562	6	Surface	Uranium-238	3.62E+02	2.37E-05		6.82E-07	1.88E-04	2.13E-04	92%
9	**562**	**6**	**Surface**	**Totals**		**2.61E-05**		**7.88E-07**	**2.05E-04**	**2.32E-04**	
9	**562**	**6**	**Surface**	**Percent**		**11%**		**0%**	**88%**		
9	563	1	Surface	Cadmium	8.96E-01			6.36E-10		6.36E-10	0%
9	563	1	Surface	Chromium	2.85E+02			9.45E-06		9.45E-06	63%
9	563	1	Surface	PCB, Total	7.40E-01	2.59E-07	3.40E-06	2.81E-07		3.94E-06	26%
9	563	1	Surface	Uranium	1.51E+01					0.00E+00	0%
9	563	1	Surface	Uranium-238	2.76E+00	1.81E-07		5.20E-09	1.44E-06	1.62E-06	11%
9	**563**	**1**	**Surface**	**Totals**		**4.40E-07**	**3.40E-06**	**9.73E-06**	**1.44E-06**	**1.50E-05**	
9	**563**	**1**	**Surface**	**Percent**		**3%**	**23%**	**65%**	**10%**		
9	563	2	Surface	Cesium-137	6.47E-01	8.75E-09		1.55E-12	7.50E-06	7.51E-06	90%
9	563	2	Surface	Uranium-238	1.49E+00	9.78E-08		2.81E-09	7.76E-07	8.76E-07	10%
9	**563**	**2**	**Surface**	**Totals**		**1.07E-07**		**2.81E-09**	**8.28E-06**	**8.39E-06**	
9	**563**	**2**	**Surface**	**Percent**		**1%**		**0%**	**99%**		
9	564	1	Surface	Arsenic	4.30E+01	1.13E-05	3.18E-05	7.32E-08		4.31E-05	62%
9	564	1	Surface	Beryllium	2.12E+00			2.01E-09		2.01E-09	0%
9	564	1	Surface	Cadmium	1.96E+00			1.39E-09		1.39E-09	0%
9	564	1	Surface	Cesium-137	6.20E-01	8.39E-09		1.49E-12	7.19E-06	7.20E-06	10%
9	564	1	Surface	Chromium	7.49E+01			2.48E-06		2.48E-06	4%
9	564	1	Surface	Iron	3.66E+04					0.00E+00	0%
9	564	1	Surface	Mercury	2.30E-01					0.00E+00	0%
9	564	1	Surface	Nickel	2.24E+01			2.30E-09		2.30E-09	0%
9	564	1	Surface	PCB, Total	1.93E+00	6.74E-07	8.88E-06	7.34E-07		1.03E-05	15%
9	564	1	Surface	Thallium	2.36E+00					0.00E+00	0%
9	564	1	Surface	Thorium-230	5.01E+00	3.16E-07		2.88E-08	1.87E-08	3.64E-07	1%
9	564	1	Surface	Uranium	5.83E+01					0.00E+00	0%
9	564	1	Surface	Uranium-234	6.93E+00	3.42E-07		1.59E-08	7.97E-09	3.66E-07	1%
9	564	1	Surface	Uranium-235	3.87E-01	1.97E-08		7.88E-10	9.60E-07	9.80E-07	1%
9	564	1	Surface	Uranium-238	8.33E+00	5.47E-07		1.57E-08	4.34E-06	4.90E-06	7%
9	564	1	Surface	Vanadium	8.06E+01					0.00E+00	0%
9	**564**	**1**	**Surface**	**Totals**		**1.32E-05**	**4.07E-05**	**3.36E-06**	**1.25E-05**	**6.97E-05**	
9	**564**	**1**	**Surface**	**Percent**		**19%**	**58%**	**5%**	**18%**		
9	567	3	Surface	Chromium	3.79E+01			1.26E-06		1.26E-06	100%
9	**567**	**3**	**Surface**	**Totals**				**1.26E-06**		**1.26E-06**	
9	**567**	**3**	**Surface**	**Percent**				**100%**			
9	567	4	Surface	Aluminum	1.25E+04					0.00E+00	0%
9	567	4	Surface	Chromium	1.63E+01			5.40E-07		5.40E-07	47%
9	567	4	Surface	Uranium-238	1.05E+00	6.88E-08		1.98E-09	5.46E-07	6.17E-07	53%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**567**	**4**	**Surface**	**Totals**		**6.88E-08**		**5.42E-07**	**5.46E-07**	**1.16E-06**	
9	**567**	**4**	**Surface**	**Percent**		**6%**		**47%**	**47%**		
10	14	1	Surface	Americium-241	1.27E+00	8.59E-08		7.18E-09	1.60E-07	2.53E-07	1%
10	14	1	Surface	Arsenic	1.10E+01	2.88E-06	8.12E-06	1.87E-08		1.10E-05	58%
10	14	1	Surface	Chromium	6.36E+01			2.11E-06		2.11E-06	11%
10	14	1	Surface	Iron	1.89E+04					0.00E+00	0%
10	14	1	Surface	Neptunium-237	2.14E-01	1.08E-08		7.64E-10	7.78E-07	7.89E-07	4%
10	14	1	Surface	Nickel	1.40E+02			1.43E-08		1.43E-08	0%
10	14	1	Surface	PCB, Total	5.00E-01	1.75E-07	2.30E-06	1.90E-07		2.66E-06	14%
10	14	1	Surface	Silver	1.67E+01					0.00E+00	0%
10	14	1	Surface	Technetium-99	4.06E+02	9.72E-07		1.15E-09	1.51E-07	1.12E-06	6%
10	14	1	Surface	Uranium	7.21E+01					0.00E+00	0%
10	14	1	Surface	Uranium-238	1.69E+00	1.11E-07		3.19E-09	8.80E-07	9.94E-07	5%
10	**14**	**1**	**Surface**	**Totals**		**4.23E-06**	**1.04E-05**	**2.34E-06**	**1.97E-06**	**1.90E-05**	
10	**14**	**1**	**Surface**	**Percent**		**22%**	**55%**	**12%**	**10%**		
10	14	2	Surface	Antimony	3.70E+00					0.00E+00	0%
10	14	2	Surface	Arsenic	1.45E+01	3.81E-06	1.07E-05	2.47E-08		1.46E-05	22%
10	14	2	Surface	Beryllium	7.10E-01			6.72E-10		6.72E-10	0%
10	14	2	Surface	Chromium	6.65E+01			2.21E-06		2.21E-06	3%
10	14	2	Surface	Copper	1.76E+02					0.00E+00	0%
10	14	2	Surface	Iron	3.72E+04					0.00E+00	0%
10	14	2	Surface	Manganese	1.44E+03					0.00E+00	0%
10	14	2	Surface	Mercury	2.67E-01					0.00E+00	0%
10	14	2	Surface	Neptunium-237	7.70E-01	3.90E-08		2.75E-09	2.80E-06	2.84E-06	4%
10	14	2	Surface	Nickel	6.78E+02			6.95E-08		6.95E-08	0%
10	14	2	Surface	PCB, Total	3.90E-01	1.36E-07	1.79E-06	1.48E-07		2.08E-06	3%
10	14	2	Surface	Thorium-230	5.98E+00	3.77E-07		3.44E-08	2.24E-08	4.34E-07	1%
10	14	2	Surface	Total PAH	3.38E-01	4.31E-07	5.27E-06	8.74E-09		5.71E-06	8%
10	14	2	Surface	Uranium	2.93E+02					0.00E+00	0%
10	14	2	Surface	Uranium-234	3.24E+01	1.60E-06		7.45E-08	3.73E-08	1.71E-06	3%
10	14	2	Surface	Uranium-235	2.00E+00	1.02E-07		4.07E-09	4.96E-06	5.06E-06	7%
10	14	2	Surface	Uranium-238	5.61E+01	3.68E-06		1.06E-07	2.92E-05	3.30E-05	49%
10	**14**	**2**	**Surface**	**Totals**		**1.02E-05**	**1.78E-05**	**2.68E-06**	**3.70E-05**	**6.77E-05**	
10	**14**	**2**	**Surface**	**Percent**		**15%**	**26%**	**4%**	**55%**		
10	14	3	Surface	Arsenic	1.30E+01	3.40E-06	9.59E-06	2.21E-08		1.30E-05	21%
10	14	3	Surface	Chromium	7.01E+01			2.32E-06		2.32E-06	4%
10	14	3	Surface	Copper	1.29E+02					0.00E+00	0%
10	14	3	Surface	Iron	3.48E+04					0.00E+00	0%
10	14	3	Surface	Manganese	1.06E+03					0.00E+00	0%
10	14	3	Surface	Mercury	7.48E+00					0.00E+00	0%
10	14	3	Surface	Molybdenum	2.21E+01					0.00E+00	0%
10	14	3	Surface	Nickel	5.76E+02			5.91E-08		5.91E-08	0%
10	14	3	Surface	PCB, Total	8.65E+00	3.02E-06	3.98E-05	3.29E-06		4.61E-05	74%
10	14	3	Surface	Uranium	2.18E+02					0.00E+00	0%
10	14	3	Surface	Uranium-238	1.50E+00	9.84E-08		2.83E-09	7.81E-07	8.82E-07	1%
10	**14**	**3**	**Surface**	**Totals**		**6.52E-06**	**4.93E-05**	**5.69E-06**	**7.81E-07**	**6.23E-05**	
10	**14**	**3**	**Surface**	**Percent**		**10%**	**79%**	**9%**	**1%**		
10	14	4	Surface	Antimony	4.30E+00					0.00E+00	0%
10	14	4	Surface	Arsenic	1.33E+01	3.48E-06	9.82E-06	2.26E-08		1.33E-05	7%
10	14	4	Surface	Chromium	7.20E+01			2.39E-06		2.39E-06	1%
10	14	4	Surface	Copper	3.54E+02					0.00E+00	0%
10	14	4	Surface	Iron	3.88E+04					0.00E+00	0%
10	14	4	Surface	Mercury	4.87E-01					0.00E+00	0%
10	14	4	Surface	Neptunium-237	2.68E+00	1.36E-07		9.56E-09	9.74E-06	9.89E-06	5%
10	14	4	Surface	Nickel	7.31E+02			7.49E-08		7.49E-08	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	4	Surface	PCB, Total	6.61E+00	2.31E-06	3.04E-05	2.51E-06		3.52E-05	18%
10	14	4	Surface	Silver	1.17E+01					0.00E+00	0%
10	14	4	Surface	Thorium-230	8.33E+00	5.26E-07		4.79E-08	3.12E-08	6.05E-07	0%
10	14	4	Surface	Total PAH	2.51E-01	3.20E-07	3.91E-06	6.48E-09		4.24E-06	2%
10	14	4	Surface	Uranium	3.72E+02					0.00E+00	0%
10	14	4	Surface	Uranium-234	1.13E+02	5.58E-06		2.60E-07	1.30E-07	5.97E-06	3%
10	14	4	Surface	Uranium-235	8.00E+00	4.08E-07		1.63E-08	1.98E-05	2.03E-05	11%
10	14	4	Surface	Uranium-238	1.69E+02	1.11E-05		3.19E-07	8.80E-05	9.94E-05	52%
10	**14**	**4**	**Surface**	**Totals**		**2.38E-05**	**4.41E-05**	**5.65E-06**	**1.18E-04**	**1.91E-04**	
10	**14**	**4**	**Surface**	**Percent**		**12%**	**23%**	**3%**	**62%**		
10	14	5	Surface	Antimony	2.30E+00					0.00E+00	0%
10	14	5	Surface	Arsenic	1.31E+01	3.43E-06	9.67E-06	2.23E-08		1.31E-05	14%
10	14	5	Surface	Cadmium	3.90E+00			2.77E-09		2.77E-09	0%
10	14	5	Surface	Chromium	4.70E+01			1.56E-06		1.56E-06	2%
10	14	5	Surface	Cobalt	1.40E+01			4.97E-08		4.97E-08	0%
10	14	5	Surface	Copper	1.34E+02					0.00E+00	0%
10	14	5	Surface	Iron	3.92E+04					0.00E+00	0%
10	14	5	Surface	Manganese	8.28E+02					0.00E+00	0%
10	14	5	Surface	Mercury	1.09E+01					0.00E+00	0%
10	14	5	Surface	Neptunium-237	1.74E+00	8.81E-08		6.21E-09	6.32E-06	6.42E-06	7%
10	14	5	Surface	Nickel	4.61E+02			4.73E-08		4.73E-08	0%
10	14	5	Surface	PCB, Total	1.00E+00	3.49E-07	4.60E-06	3.80E-07		5.33E-06	6%
10	14	5	Surface	Silver	1.29E+01					0.00E+00	0%
10	14	5	Surface	Technetium-99	1.01E+02	2.42E-07		2.87E-10	3.75E-08	2.80E-07	0%
10	14	5	Surface	Thallium	4.10E-01					0.00E+00	0%
10	14	5	Surface	Thorium-230	1.39E+01	8.77E-07		7.99E-08	5.20E-08	1.01E-06	1%
10	14	5	Surface	Total PAH	1.21E-01	1.54E-07	1.89E-06	3.13E-09		2.04E-06	2%
10	14	5	Surface	Uranium	2.62E+02					0.00E+00	0%
10	14	5	Surface	Uranium-234	5.22E+01	2.58E-06		1.20E-07	6.01E-08	2.76E-06	3%
10	14	5	Surface	Uranium-235	3.33E+00	1.70E-07		6.78E-09	8.26E-06	8.43E-06	9%
10	14	5	Surface	Uranium-238	9.42E+01	6.18E-06		1.78E-07	4.90E-05	5.54E-05	57%
10	**14**	**5**	**Surface**	**Totals**		**1.41E-05**	**1.62E-05**	**2.45E-06**	**6.38E-05**	**9.64E-05**	
10	**14**	**5**	**Surface**	**Percent**		**15%**	**17%**	**3%**	**66%**		
10	14	6	Surface	Antimony	2.70E+00					0.00E+00	0%
10	14	6	Surface	Cadmium	8.40E-01			5.97E-10		5.97E-10	0%
10	14	6	Surface	Chromium	4.46E+02			1.48E-05		1.48E-05	17%
10	14	6	Surface	Copper	1.22E+02					0.00E+00	0%
10	14	6	Surface	Mercury	3.47E-01					0.00E+00	0%
10	14	6	Surface	Neptunium-237	2.65E+00	1.34E-07		9.46E-09	9.63E-06	9.78E-06	11%
10	14	6	Surface	Nickel	9.63E+02			9.88E-08		9.88E-08	0%
10	14	6	Surface	PCB, Total	5.00E+00	1.75E-06	2.30E-05	1.90E-06		2.66E-05	30%
10	14	6	Surface	Silver	1.19E+01					0.00E+00	0%
10	14	6	Surface	Uranium	5.79E+02					0.00E+00	0%
10	14	6	Surface	Uranium-234	3.41E+01	1.68E-06		7.84E-08	3.92E-08	1.80E-06	2%
10	14	6	Surface	Uranium-235	2.27E+00	1.16E-07		4.62E-09	5.63E-06	5.75E-06	6%
10	14	6	Surface	Uranium-238	5.08E+01	3.33E-06		9.58E-08	2.64E-05	2.99E-05	34%
10	**14**	**6**	**Surface**	**Totals**		**7.01E-06**	**2.30E-05**	**1.70E-05**	**4.17E-05**	**8.87E-05**	
10	**14**	**6**	**Surface**	**Percent**		**8%**	**26%**	**19%**	**47%**		
10	14	7	Surface	Antimony	7.50E-01					0.00E+00	0%
10	14	7	Surface	Arsenic	1.13E+01	2.96E-06	8.35E-06	1.92E-08		1.13E-05	15%
10	14	7	Surface	Cadmium	2.70E+00			1.92E-09		1.92E-09	0%
10	14	7	Surface	Chromium	6.46E+01			2.14E-06		2.14E-06	3%
10	14	7	Surface	Mercury	7.82E+00					0.00E+00	0%
10	14	7	Surface	Neptunium-237	1.49E+00	7.54E-08		5.32E-09	5.42E-06	5.50E-06	7%
10	14	7	Surface	Nickel	1.22E+03			1.25E-07		1.25E-07	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	7	Surface	PCB, Total	7.60E+00	2.66E-06	3.50E-05	2.89E-06		4.05E-05	53%
10	14	7	Surface	Total PAH	6.31E-02	8.05E-08	9.84E-07	1.63E-09		1.07E-06	1%
10	14	7	Surface	Uranium	3.33E+02					0.00E+00	0%
10	14	7	Surface	Uranium-234	1.28E+01	6.32E-07		2.94E-08	1.47E-08	6.76E-07	1%
10	14	7	Surface	Uranium-235	9.60E-01	4.89E-08		1.95E-09	2.38E-06	2.43E-06	3%
10	14	7	Surface	Uranium-238	2.13E+01	1.40E-06		4.02E-08	1.11E-05	1.25E-05	16%
10	**14**	**7**	**Surface**	**Totals**		**7.85E-06**	**4.43E-05**	**5.25E-06**	**1.89E-05**	**7.63E-05**	
10	**14**	**7**	**Surface**	**Percent**		**10%**	**58%**	**7%**	**25%**		
10	14	8	Surface	Antimony	6.10E-01					0.00E+00	0%
10	14	8	Surface	Arsenic	1.14E+01	2.98E-06	8.41E-06	1.94E-08		1.14E-05	24%
10	14	8	Surface	Chromium	4.60E+01			1.53E-06		1.53E-06	3%
10	14	8	Surface	Mercury	7.90E+00					0.00E+00	0%
10	14	8	Surface	Neptunium-237	8.80E-01	4.46E-08		3.14E-09	3.20E-06	3.25E-06	7%
10	14	8	Surface	Nickel	6.73E+02			6.90E-08		6.90E-08	0%
10	14	8	Surface	PCB, Total	5.00E+00	1.75E-06	2.30E-05	1.90E-06		2.66E-05	55%
10	14	8	Surface	Silver	9.63E+00					0.00E+00	0%
10	14	8	Surface	Total PAH	6.28E-02	8.00E-08	9.78E-07	1.62E-09		1.06E-06	2%
10	14	8	Surface	Uranium	3.35E+02					0.00E+00	0%
10	14	8	Surface	Uranium-235	2.38E-01	1.21E-08		4.85E-10	5.90E-07	6.03E-07	1%
10	14	8	Surface	Uranium-238	5.92E+00	3.89E-07		1.12E-08	3.08E-06	3.48E-06	7%
10	**14**	**8**	**Surface**	**Totals**		**5.26E-06**	**3.24E-05**	**3.53E-06**	**6.87E-06**	**4.80E-05**	
10	**14**	**8**	**Surface**	**Percent**		**11%**	**67%**	**7%**	**14%**		
10	14	9	Surface	Antimony	2.00E+00					0.00E+00	0%
10	14	9	Surface	Arsenic	1.40E+01	3.68E-06	1.04E-05	2.39E-08		1.41E-05	1%
10	14	9	Surface	Cadmium	9.40E-01			6.68E-10		6.68E-10	0%
10	14	9	Surface	Cesium-137	4.53E-01	6.13E-09		1.09E-12	5.25E-06	5.26E-06	1%
10	14	9	Surface	Chromium	4.64E+01			1.54E-06		1.54E-06	0%
10	14	9	Surface	Mercury	1.13E+00					0.00E+00	0%
10	14	9	Surface	Neptunium-237	1.09E+01	5.53E-07		3.90E-08	3.97E-05	4.03E-05	4%
10	14	9	Surface	Nickel	9.43E+02			9.68E-08		9.68E-08	0%
10	14	9	Surface	PCB, Total	6.84E+00	2.39E-06	3.15E-05	2.60E-06		3.65E-05	4%
10	14	9	Surface	Technetium-99	1.96E+02	4.69E-07		5.57E-10	7.28E-08	5.42E-07	0%
10	14	9	Surface	Total PAH	4.87E-01	6.22E-07	7.60E-06	1.26E-08		8.23E-06	1%
10	14	9	Surface	Uranium	1.46E+03					0.00E+00	0%
10	14	9	Surface	Uranium-234	8.32E+02	4.11E-05		1.91E-06	9.57E-07	4.40E-05	4%
10	14	9	Surface	Uranium-235	5.46E+01	2.78E-06		1.11E-07	1.35E-04	1.38E-04	14%
10	14	9	Surface	Uranium-238	1.20E+03	7.88E-05		2.26E-06	6.25E-04	7.06E-04	71%
10	**14**	**9**	**Surface**	**Totals**		**1.30E-04**	**4.94E-05**	**8.60E-06**	**8.06E-04**	**9.94E-04**	
10	**14**	**9**	**Surface**	**Percent**		**13%**	**5%**	**1%**	**81%**		
10	14	10	Surface	Antimony	9.40E-01					0.00E+00	0%
10	14	10	Surface	Arsenic	1.12E+01	2.95E-06	8.31E-06	1.91E-08		1.13E-05	11%
10	14	10	Surface	Chromium	4.19E+01			1.39E-06		1.39E-06	1%
10	14	10	Surface	Copper	1.41E+02					0.00E+00	0%
10	14	10	Surface	Iron	2.75E+04					0.00E+00	0%
10	14	10	Surface	Mercury	2.51E+01					0.00E+00	0%
10	14	10	Surface	Neptunium-237	2.64E+00	1.34E-07		9.42E-09	9.60E-06	9.74E-06	9%
10	14	10	Surface	Nickel	6.00E+02			6.16E-08		6.16E-08	0%
10	14	10	Surface	PCB, Total	9.38E+00	3.28E-06	4.31E-05	3.57E-06		5.00E-05	47%
10	14	10	Surface	Total PAH	2.72E-01	3.46E-07	4.23E-06	7.02E-09		4.59E-06	4%
10	14	10	Surface	Uranium	2.88E+02					0.00E+00	0%
10	14	10	Surface	Uranium-234	2.42E+01	1.19E-06		5.56E-08	2.78E-08	1.28E-06	1%
10	14	10	Surface	Uranium-235	1.76E+00	8.97E-08		3.58E-09	4.36E-06	4.46E-06	4%
10	14	10	Surface	Uranium-238	4.09E+01	2.68E-06		7.71E-08	2.13E-05	2.41E-05	23%
10	**14**	**10**	**Surface**	**Totals**		**1.07E-05**	**5.57E-05**	**5.19E-06**	**3.53E-05**	**1.07E-04**	
10	**14**	**10**	**Surface**	**Percent**		**10%**	**52%**	**5%**	**33%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	518	1	Surface	Carbazole	1.17E+01	4.10E-08	3.85E-07			4.26E-07	0%
10	518	1	Surface	Cobalt	6.80E+00			2.42E-08		2.42E-08	0%
10	518	1	Surface	Nickel	1.29E+01			1.32E-09		1.32E-09	0%
10	518	1	Surface	PCB, Total	6.30E-01	2.20E-07	2.90E-06	2.39E-07		3.36E-06	1%
10	518	1	Surface	Pyrene	3.94E+01					0.00E+00	0%
10	518	1	Surface	Total PAH	3.90E+01	4.97E-05	6.07E-04	1.01E-06		6.58E-04	99%
10	518	1	Surface	Uranium	2.17E+02					0.00E+00	0%
10	518	1	Surface	Uranium-235	6.74E-02	3.43E-09		1.37E-10	1.67E-07	1.71E-07	0%
10	518	1	Surface	Uranium-238	1.51E+00	9.94E-08		2.85E-09	7.88E-07	8.90E-07	0%
10	**518**	**1**	**Surface**	**Totals**		**5.01E-05**	**6.11E-04**	**1.27E-06**	**9.55E-07**	**6.63E-04**	
10	**518**	**1**	**Surface**	**Percent**		**8%**	**92%**	**0%**	**0%**		
10	520	1	Surface	Cesium-137	9.62E-01	1.30E-08		2.31E-12	1.12E-05	1.12E-05	60%
10	520	1	Surface	Chromium	3.17E+01			1.05E-06		1.05E-06	6%
10	520	1	Surface	Iron	1.56E+04					0.00E+00	0%
10	520	1	Surface	Mercury	1.07E+01					0.00E+00	0%
10	520	1	Surface	Neptunium-237	6.56E-01	3.32E-08		2.34E-09	2.38E-06	2.42E-06	13%
10	520	1	Surface	Nickel	2.60E+02			2.67E-08		2.67E-08	0%
10	520	1	Surface	Silver	1.30E+01					0.00E+00	0%
10	520	1	Surface	Thorium-230	1.13E+01	7.16E-07		6.52E-08	4.24E-08	8.23E-07	4%
10	520	1	Surface	Total PAH	3.18E-02	4.06E-08	4.96E-07	8.23E-10		5.38E-07	3%
10	520	1	Surface	Uranium	2.29E+01					0.00E+00	0%
10	520	1	Surface	Uranium-235	1.26E-01	6.42E-09		2.57E-10	3.12E-07	3.19E-07	2%
10	520	1	Surface	Uranium-238	3.93E+00	2.58E-07		7.41E-09	2.05E-06	2.31E-06	12%
10	**520**	**1**	**Surface**	**Totals**		**1.07E-06**	**4.96E-07**	**1.15E-06**	**1.59E-05**	**1.87E-05**	
10	**520**	**1**	**Surface**	**Percent**		**6%**	**3%**	**6%**	**85%**		
10	520	2	Surface	Beryllium	5.79E-01			5.48E-10		5.48E-10	0%
10	520	2	Surface	Chromium	6.67E+01			2.21E-06		2.21E-06	25%
10	520	2	Surface	Manganese	5.89E+02					0.00E+00	0%
10	520	2	Surface	Mercury	1.19E+01					0.00E+00	0%
10	520	2	Surface	Neptunium-237	7.48E-02	3.79E-09		2.67E-10	2.72E-07	2.76E-07	3%
10	520	2	Surface	Nickel	3.11E+02			3.19E-08		3.19E-08	0%
10	520	2	Surface	Total PAH	3.17E-01	4.04E-07	4.94E-06	8.19E-09		5.35E-06	60%
10	520	2	Surface	Uranium	3.96E+01					0.00E+00	0%
10	520	2	Surface	Uranium-238	1.78E+00	1.17E-07		3.35E-09	9.26E-07	1.05E-06	12%
10	**520**	**2**	**Surface**	**Totals**		**5.25E-07**	**4.94E-06**	**2.25E-06**	**1.20E-06**	**8.92E-06**	
10	**520**	**2**	**Surface**	**Percent**		**6%**	**55%**	**25%**	**13%**		
10	520	3	Surface	Chromium	3.97E+01			1.32E-06		1.32E-06	31%
10	520	3	Surface	Copper	1.19E+02					0.00E+00	0%
10	520	3	Surface	Nickel	2.65E+02			2.72E-08		2.72E-08	1%
10	520	3	Surface	Silver	1.27E+01					0.00E+00	0%
10	520	3	Surface	Total PAH	1.18E-01	1.51E-07	1.84E-06	3.05E-09		1.99E-06	47%
10	520	3	Surface	Uranium	1.92E+01					0.00E+00	0%
10	520	3	Surface	Uranium-238	1.57E+00	1.03E-07		2.96E-09	8.17E-07	9.23E-07	22%
10	**520**	**3**	**Surface**	**Totals**		**2.54E-07**	**1.84E-06**	**1.35E-06**	**8.17E-07**	**4.26E-06**	
10	**520**	**3**	**Surface**	**Percent**		**6%**	**43%**	**32%**	**19%**		
10	520	4	Surface	Chromium	3.82E+01			1.27E-06		1.27E-06	7%
10	520	4	Surface	Copper	1.11E+02					0.00E+00	0%
10	520	4	Surface	Mercury	9.69E+00					0.00E+00	0%
10	520	4	Surface	Neptunium-237	7.40E-01	3.75E-08		2.64E-09	2.69E-06	2.73E-06	15%
10	520	4	Surface	Nickel	2.82E+02			2.89E-08		2.89E-08	0%
10	520	4	Surface	Silver	1.04E+01					0.00E+00	0%
10	520	4	Surface	Total PAH	5.52E-01	7.05E-07	8.61E-06	1.43E-08		9.33E-06	53%
10	520	4	Surface	Uranium	2.40E+01					0.00E+00	0%
10	520	4	Surface	Uranium-235	2.42E-01	1.23E-08		4.93E-10	6.00E-07	6.13E-07	3%
10	520	4	Surface	Uranium-238	6.26E+00	4.11E-07		1.18E-08	3.26E-06	3.68E-06	21%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	**520**	**4**	**Surface**	**Totals**		**1.17E-06**	**8.61E-06**	**1.33E-06**	**6.55E-06**	**1.76E-05**	
10	**520**	**4**	**Surface**	**Percent**		**7%**	**49%**	**8%**	**37%**		
10	520	5	Surface	Antimony	9.60E-01					0.00E+00	0%
10	520	5	Surface	Chromium	3.68E+01			1.22E-06		1.22E-06	13%
10	520	5	Surface	Neptunium-237	1.55E-01	7.85E-09		5.53E-10	5.63E-07	5.72E-07	6%
10	520	5	Surface	Nickel	1.47E+02			1.51E-08		1.51E-08	0%
10	520	5	Surface	Total PAH	3.87E-01	4.94E-07	6.04E-06	1.00E-08		6.54E-06	71%
10	520	5	Surface	Uranium-238	1.45E+00	9.52E-08		2.73E-09	7.55E-07	8.53E-07	9%
10	**520**	**5**	**Surface**	**Totals**		**5.97E-07**	**6.04E-06**	**1.25E-06**	**1.32E-06**	**9.20E-06**	
10	**520**	**5**	**Surface**	**Percent**		**6%**	**66%**	**14%**	**14%**		
11	81	1	Surface	Aluminum	9.57E+03					0.00E+00	0%
11	81	1	Surface	Arsenic	1.03E+01	2.69E-06	7.58E-06	1.74E-08		1.03E-05	1%
11	81	1	Surface	Beryllium	7.57E-01			7.17E-10		7.17E-10	0%
11	81	1	Surface	Chromium	8.62E+01			2.86E-06		2.86E-06	0%
11	81	1	Surface	Mercury	8.33E+00					0.00E+00	0%
11	81	1	Surface	Nickel	7.29E+01			7.48E-09		7.48E-09	0%
11	81	1	Surface	PCB, Total	1.60E+02	5.58E-05	7.35E-04	6.07E-05		8.51E-04	97%
11	81	1	Surface	Silver	2.70E+00					0.00E+00	0%
11	81	1	Surface	Total PAH	5.53E-01	7.05E-07	8.62E-06	1.43E-08		9.34E-06	1%
11	81	1	Surface	Uranium	6.50E+03					0.00E+00	0%
11	81	1	Surface	Uranium-238	2.29E+00	1.50E-07		4.31E-09	1.19E-06	1.34E-06	0%
11	**81**	**1**	**Surface**	**Totals**		**5.94E-05**	**7.51E-04**	**6.36E-05**	**1.19E-06**	**8.75E-04**	
11	**81**	**1**	**Surface**	**Percent**		**7%**	**86%**	**7%**	**0%**		
11	153	1	Surface	PCB, Total	5.09E-01	1.78E-07	2.34E-06	1.93E-07		2.71E-06	65%
11	153	1	Surface	Total PAH	8.69E-02	1.11E-07	1.35E-06	2.25E-09		1.47E-06	35%
11	**153**	**1**	**Surface**	**Totals**		**2.89E-07**	**3.70E-06**	**1.96E-07**		**4.18E-06**	
11	**153**	**1**	**Surface**	**Percent**		**7%**	**88%**	**5%**			
11	156	1	Surface	Chromium	4.90E+01			1.62E-06		1.62E-06	27%
11	156	1	Surface	Manganese	2.83E+03					0.00E+00	0%
11	156	1	Surface	Mercury	9.87E+00					0.00E+00	0%
11	156	1	Surface	Nickel	6.16E+01			6.32E-09		6.32E-09	0%
11	156	1	Surface	PCB, Total	3.00E-01	1.05E-07	1.38E-06	1.14E-07		1.60E-06	27%
11	156	1	Surface	Total PAH	8.26E-02	1.05E-07	1.29E-06	2.13E-09		1.40E-06	24%
11	156	1	Surface	Uranium	2.32E+01					0.00E+00	0%
11	156	1	Surface	Uranium-238	2.19E+00	1.44E-07		4.13E-09	1.14E-06	1.29E-06	22%
11	**156**	**1**	**Surface**	**Totals**		**3.54E-07**	**2.67E-06**	**1.75E-06**	**1.14E-06**	**5.91E-06**	
11	**156**	**1**	**Surface**	**Percent**		**6%**	**45%**	**30%**	**19%**		
11	160	1	Surface	Antimony	6.80E-01					0.00E+00	0%
11	160	1	Surface	Total PAH	5.29E-02	6.75E-08	8.25E-07	1.37E-09		8.93E-07	100%
11	**160**	**1**	**Surface**	**Totals**		**6.75E-08**	**8.25E-07**	**1.37E-09**		**8.93E-07**	
11	**160**	**1**	**Surface**	**Percent**		**8%**	**92%**	**0%**			
11	163	1	Surface	Chromium	4.94E+01			1.64E-06		1.64E-06	37%
11	163	1	Surface	Total PAH	1.63E-01	2.08E-07	2.54E-06	4.21E-09		2.75E-06	63%
11	**163**	**1**	**Surface**	**Totals**		**2.08E-07**	**2.54E-06**	**1.64E-06**		**4.39E-06**	
11	**163**	**1**	**Surface**	**Percent**		**5%**	**58%**	**37%**			
11	219	1	Surface	Neptunium-237	3.31E-01	1.68E-08		1.18E-09	1.20E-06	1.22E-06	22%
11	219	1	Surface	Nickel	6.71E+01			6.89E-09		6.89E-09	0%
11	219	1	Surface	Total PAH	7.50E-02	9.57E-08	1.17E-06	1.94E-09		1.27E-06	23%
11	219	1	Surface	Uranium-235	1.92E-01	9.78E-09		3.91E-10	4.76E-07	4.86E-07	9%
11	219	1	Surface	Uranium-238	4.40E+00	2.89E-07		8.29E-09	2.29E-06	2.59E-06	46%
11	**219**	**1**	**Surface**	**Totals**		**4.11E-07**	**1.17E-06**	**1.87E-08**	**3.97E-06**	**5.57E-06**	
11	**219**	**1**	**Surface**	**Percent**		**7%**	**21%**	**0%**	**71%**		
11	488	1	Surface	Cesium-137	5.20E-01	7.04E-09		1.25E-12	6.03E-06	6.04E-06	9%
11	488	1	Surface	PCB, Total	1.03E+01	3.60E-06	4.74E-05	3.91E-06		5.49E-05	80%
11	488	1	Surface	Total PAH	2.50E-01	3.19E-07	3.89E-06	6.45E-09		4.22E-06	6%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.31. ELCR for the Future Industrial Worker (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
11	488	1	Surface	Uranium	1.48E+01					0.00E+00	0%
11	488	1	Surface	Uranium-235	1.49E-01	7.59E-09		3.03E-10	3.69E-07	3.77E-07	1%
11	488	1	Surface	Uranium-238	4.54E+00	2.98E-07		8.56E-09	2.36E-06	2.67E-06	4%
11	**488**	**1**	**Surface**	**Totals**		**4.23E-06**	**5.13E-05**	**3.93E-06**	**8.76E-06**	**6.82E-05**	
11	**488**	**1**	**Surface**	**Percent**		**6%**	**75%**	**6%**	**13%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	1	1	Surface	Beryllium	3.89E+00			2.73E-09		2.73E-09	0%
5	1	1	Surface	Cadmium	1.10E+00			5.78E-10		5.78E-10	0%
5	1	1	Surface	Cesium-137	5.91E-01	5.68E-08		1.05E-12	5.07E-06	5.13E-06	15%
5	1	1	Surface	Chromium	1.28E+01			3.14E-07		3.14E-07	1%
5	1	1	Surface	Neptunium-237	4.02E-01	1.45E-07		1.06E-09	1.08E-06	1.23E-06	4%
5	1	1	Surface	PCB, Total	1.76E-01	4.37E-07	5.99E-07	4.95E-08		1.09E-06	3%
5	1	1	Surface	Plutonium-239/240	6.14E+00	3.76E-06		3.05E-08	4.15E-09	3.80E-06	11%
5	1	1	Surface	Thorium-230	4.40E+01	1.97E-05		1.87E-07	1.22E-07	2.00E-05	60%
5	1	1	Surface	Uranium-235	1.06E-01	3.84E-08		1.60E-10	1.94E-07	2.33E-07	1%
5	1	1	Surface	Uranium-238	1.97E+00	9.20E-07		2.75E-09	7.60E-07	1.68E-06	5%
5	**1**	**1**	**Surface**	**Totals**		**2.51E-05**	**5.99E-07**	**5.89E-07**	**7.23E-06**	**3.35E-05**	
5	**1**	**1**	**Surface**	**Percent**		**75%**	**2%**	**2%**	**22%**		
5	1	2	Surface	Beryllium	8.23E+00			5.77E-09		5.77E-09	0%
5	1	2	Surface	Cadmium	6.46E+00			3.40E-09		3.40E-09	0%
5	1	2	Surface	Chromium	2.01E+02			4.93E-06		4.93E-06	2%
5	1	2	Surface	Copper	1.81E+02					0.00E+00	0%
5	1	2	Surface	Mercury	5.94E+00					0.00E+00	0%
5	1	2	Surface	Nickel	5.75E+01			4.36E-09		4.36E-09	0%
5	1	2	Surface	PCB, Total	3.21E+01	7.97E-05	1.09E-04	9.03E-06		1.98E-04	98%
5	1	2	Surface	Silver	3.31E+01					0.00E+00	0%
5	1	2	Surface	Thallium	3.70E-01					0.00E+00	0%
5	1	2	Surface	Vanadium	3.49E+01					0.00E+00	0%
5	**1**	**2**	**Surface**	**Totals**		**7.97E-05**	**1.09E-04**	**1.40E-05**		**2.03E-04**	
5	**1**	**2**	**Surface**	**Percent**		**39%**	**54%**	**7%**			
5	1	3	Surface	Chromium	1.45E+01			3.55E-07		3.55E-07	11%
5	1	3	Surface	PCB, Total	2.17E-01	5.39E-07	7.38E-07	6.10E-08		1.34E-06	42%
5	1	3	Surface	Uranium-238	1.73E+00	8.07E-07		2.41E-09	6.66E-07	1.48E-06	47%
5	**1**	**3**	**Surface**	**Totals**		**1.35E-06**	**7.38E-07**	**4.18E-07**	**6.66E-07**	**3.17E-06**	
5	**1**	**3**	**Surface**	**Percent**		**42%**	**23%**	**13%**	**21%**		
5	1	4	Surface	Beryllium	7.25E-01			5.08E-10		5.08E-10	0%
5	1	4	Surface	Chromium	9.30E+01			2.28E-06		2.28E-06	36%
5	1	4	Surface	Cobalt-60	2.20E-02	1.97E-09		1.18E-13	9.22E-07	9.24E-07	15%
5	1	4	Surface	Nickel	4.69E+01			3.56E-09		3.56E-09	0%
5	1	4	Surface	PCB, Total	1.30E-01	3.23E-07	4.42E-07	3.66E-08		8.02E-07	13%
5	1	4	Surface	Thorium-230	5.03E+00	2.26E-06		2.14E-08	1.39E-08	2.29E-06	36%
5	**1**	**4**	**Surface**	**Totals**		**2.58E-06**	**4.42E-07**	**2.34E-06**	**9.36E-07**	**6.30E-06**	
5	**1**	**4**	**Surface**	**Percent**		**41%**	**7%**	**37%**	**15%**		
5	1	5	Surface	Beryllium	8.30E+00			5.82E-09		5.82E-09	0%
5	1	5	Surface	Cadmium	1.20E+00			6.31E-10		6.31E-10	0%
5	1	5	Surface	Nickel	4.07E+01			3.09E-09		3.09E-09	0%
5	1	5	Surface	PCB, Total	2.70E-01	6.70E-07	9.19E-07	7.59E-08		1.67E-06	45%
5	1	5	Surface	Total PAH	9.83E-02	8.91E-07	1.13E-06	1.88E-09		2.03E-06	55%
5	**1**	**5**	**Surface**	**Totals**		**1.56E-06**	**2.05E-06**	**8.74E-08**		**3.70E-06**	
5	**1**	**5**	**Surface**	**Percent**		**42%**	**55%**	**2%**			
5	99	1	Surface	Chromium	5.51E+01			1.35E-06		1.35E-06	51%
5	99	1	Surface	Cobalt-60	1.19E-02	1.06E-09		6.36E-14	4.99E-07	5.00E-07	19%
5	99	1	Surface	Mercury	9.53E+00					0.00E+00	0%
5	99	1	Surface	Nickel	7.02E+01			5.33E-09		5.33E-09	0%
5	99	1	Surface	Silver	1.03E+01					0.00E+00	0%
5	99	1	Surface	Uranium-238	9.45E-01	4.41E-07		1.32E-09	3.64E-07	8.06E-07	30%
5	**99**	**1**	**Surface**	**Totals**		**4.42E-07**		**1.36E-06**	**8.63E-07**	**2.66E-06**	
5	**99**	**1**	**Surface**	**Percent**		**17%**		**51%**	**32%**		
5	194	1	Surface	Antimony	1.50E+00					0.00E+00	0%
5	194	1	Surface	Chromium	3.87E+01			9.49E-07		9.49E-07	100%
5	194	1	Surface	Mercury	6.71E+00					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	1	Surface	Nickel	5.84E+01			4.43E-09		4.43E-09	0%
5	194	1	Surface	Silver	1.09E+01					0.00E+00	0%
5	**194**	**1**	**Surface**	**Totals**				**9.54E-07**		**9.54E-07**	
5	**194**	**1**	**Surface**	**Percent**				**100%**			
5	194	2	Surface	Chromium	5.96E+01			1.46E-06		1.46E-06	55%
5	194	2	Surface	Silver	1.31E+01					0.00E+00	0%
5	194	2	Surface	Uranium	2.28E+01					0.00E+00	0%
5	194	2	Surface	Uranium-238	1.42E+00	6.62E-07		1.98E-09	5.47E-07	1.21E-06	45%
5	**194**	**2**	**Surface**	**Totals**		**6.62E-07**		**1.46E-06**	**5.47E-07**	**2.67E-06**	
5	**194**	**2**	**Surface**	**Percent**		**25%**		**55%**	**20%**		
5	194	3	Surface	Antimony	6.90E-01					0.00E+00	0%
5	194	3	Surface	Arsenic	1.46E+01	2.73E-05	8.01E-06	1.84E-08		3.53E-05	92%
5	194	3	Surface	Chromium	3.90E+01			9.56E-07		9.56E-07	3%
5	194	3	Surface	Nickel	6.40E+01			4.86E-09		4.86E-09	0%
5	194	3	Surface	Total PAH	3.93E-02	3.56E-07	4.53E-07	7.51E-10		8.10E-07	2%
5	194	3	Surface	Uranium-238	1.28E+00	5.99E-07		1.79E-09	4.95E-07	1.09E-06	3%
5	**194**	**3**	**Surface**	**Totals**		**2.82E-05**	**8.46E-06**	**9.82E-07**	**4.95E-07**	**3.81E-05**	
5	**194**	**3**	**Surface**	**Percent**		**74%**	**22%**	**3%**	**1%**		
5	194	4	Surface	Chromium	4.84E+01			1.19E-06		1.19E-06	28%
5	194	4	Surface	Mercury	8.92E+00					0.00E+00	0%
5	194	4	Surface	Nickel	6.91E+01			5.24E-09		5.24E-09	0%
5	194	4	Surface	Silver	1.18E+01					0.00E+00	0%
5	194	4	Surface	Total PAH	7.30E-02	6.61E-07	8.41E-07	1.39E-09		1.50E-06	36%
5	194	4	Surface	Uranium-238	1.73E+00	8.07E-07		2.41E-09	6.66E-07	1.48E-06	35%
5	**194**	**4**	**Surface**	**Totals**		**1.47E-06**	**8.41E-07**	**1.20E-06**	**6.66E-07**	**4.17E-06**	
5	**194**	**4**	**Surface**	**Percent**		**35%**	**20%**	**29%**	**16%**		
5	194	5	Surface	Chromium	4.58E+01			1.12E-06		1.12E-06	40%
5	194	5	Surface	Mercury	8.69E+00					0.00E+00	0%
5	194	5	Surface	Nickel	7.54E+01			5.73E-09		5.73E-09	0%
5	194	5	Surface	Silver	1.25E+01					0.00E+00	0%
5	194	5	Surface	Total PAH	2.37E-02	2.15E-07	2.73E-07	4.53E-10		4.89E-07	17%
5	194	5	Surface	Uranium-238	1.38E+00	6.43E-07		1.93E-09	5.32E-07	1.18E-06	42%
5	**194**	**5**	**Surface**	**Totals**		**8.58E-07**	**2.73E-07**	**1.13E-06**	**5.32E-07**	**2.79E-06**	
5	**194**	**5**	**Surface**	**Percent**		**31%**	**10%**	**40%**	**19%**		
5	194	6	Surface	Chromium	3.70E+01			9.08E-07		9.08E-07	45%
5	194	6	Surface	Manganese	1.08E+03					0.00E+00	0%
5	194	6	Surface	Nickel	8.06E+01			6.12E-09		6.12E-09	0%
5	194	6	Surface	Silver	9.89E+00					0.00E+00	0%
5	194	6	Surface	Uranium-238	1.32E+00	6.15E-07		1.84E-09	5.08E-07	1.13E-06	55%
5	**194**	**6**	**Surface**	**Totals**		**6.15E-07**		**9.16E-07**	**5.08E-07**	**2.04E-06**	
5	**194**	**6**	**Surface**	**Percent**		**30%**		**45%**	**25%**		
5	194	7	Surface	Chromium	5.32E+01			1.30E-06		1.30E-06	100%
5	194	7	Surface	Nickel	7.71E+01			5.86E-09		5.86E-09	0%
5	194	7	Surface	Silver	1.25E+01					0.00E+00	0%
5	**194**	**7**	**Surface**	**Totals**				**1.31E-06**		**1.31E-06**	
5	**194**	**7**	**Surface**	**Percent**				**100%**			
5	194	8	Surface	Bis(2-ethylhexyl)phthalate	1.50E+01	2.61E-07	2.55E-07	1.05E-11		5.16E-07	4%
5	194	8	Surface	Chromium	5.36E+01			1.31E-06		1.31E-06	10%
5	194	8	Surface	Manganese	8.00E+02					0.00E+00	0%
5	194	8	Surface	Total PAH	4.85E-01	4.39E-06	5.59E-06	9.27E-09		1.00E-05	77%
5	194	8	Surface	Uranium-238	1.39E+00	6.48E-07		1.94E-09	5.35E-07	1.19E-06	9%
5	**194**	**8**	**Surface**	**Totals**		**5.30E-06**	**5.85E-06**	**1.33E-06**	**5.35E-07**	**1.30E-05**	
5	**194**	**8**	**Surface**	**Percent**		**41%**	**45%**	**10%**	**4%**		
5	194	9	Surface	Arsenic	1.14E+01	2.13E-05	6.25E-06	1.44E-08		2.75E-05	96%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	9	Surface	Chromium	5.17E+01			1.27E-06		1.27E-06	4%
5	**194**	**9**	**Surface**	**Totals**		**2.13E-05**	**6.25E-06**	**1.28E-06**		**2.88E-05**	
5	**194**	**9**	**Surface**	**Percent**		**74%**	**22%**	**4%**			
5	194	10	Surface	Arsenic	1.22E+01	2.26E-05	6.65E-06	1.53E-08		2.93E-05	70%
5	194	10	Surface	Cesium-137	5.81E-01	5.58E-08		1.03E-12	4.99E-06	5.04E-06	12%
5	194	10	Surface	Chromium	3.63E+01			8.90E-07		8.90E-07	2%
5	194	10	Surface	Nickel	7.60E+01			5.77E-09		5.77E-09	0%
5	194	10	Surface	Total PAH	2.57E-01	2.33E-06	2.97E-06	4.92E-09		5.30E-06	13%
5	194	10	Surface	Uranium-238	1.49E+00	6.95E-07		2.08E-09	5.74E-07	1.27E-06	3%
5	**194**	**10**	**Surface**	**Totals**		**2.57E-05**	**9.62E-06**	**9.18E-07**	**5.56E-06**	**4.18E-05**	
5	**194**	**10**	**Surface**	**Percent**		**62%**	**23%**	**2%**	**13%**		
5	194	11	Surface	Chromium	3.27E+01			8.01E-07		8.01E-07	27%
5	194	11	Surface	Mercury	8.09E+00					0.00E+00	0%
5	194	11	Surface	Nickel	1.01E+02			7.64E-09		7.64E-09	0%
5	194	11	Surface	PCB, Total	8.40E-02	2.09E-07	2.86E-07	2.36E-08		5.18E-07	17%
5	194	11	Surface	Silver	1.33E+01					0.00E+00	0%
5	194	11	Surface	Total PAH	7.95E-02	7.21E-07	9.17E-07	1.52E-09		1.64E-06	55%
5	**194**	**11**	**Surface**	**Totals**		**9.29E-07**	**1.20E-06**	**8.34E-07**		**2.97E-06**	
5	**194**	**11**	**Surface**	**Percent**		**31%**	**41%**	**28%**			
5	194	12	Surface	Chromium	6.34E+01			1.55E-06		1.55E-06	8%
5	194	12	Surface	Nickel	7.86E+01			5.97E-09		5.97E-09	0%
5	194	12	Surface	Silver	1.20E+01					0.00E+00	0%
5	194	12	Surface	Total PAH	8.91E-01	8.08E-06	1.03E-05	1.70E-08		1.84E-05	92%
5	**194**	**12**	**Surface**	**Totals**		**8.08E-06**	**1.03E-05**	**1.58E-06**		**1.99E-05**	
5	**194**	**12**	**Surface**	**Percent**		**41%**	**52%**	**8%**			
5	194	13	Surface	Chromium	4.77E+01			1.17E-06		1.17E-06	38%
5	194	13	Surface	Nickel	6.03E+01			4.58E-09		4.58E-09	0%
5	194	13	Surface	Total PAH	9.13E-02	8.28E-07	1.05E-06	1.75E-09		1.88E-06	62%
5	**194**	**13**	**Surface**	**Totals**		**8.28E-07**	**1.05E-06**	**1.17E-06**		**3.06E-06**	
5	**194**	**13**	**Surface**	**Percent**		**27%**	**34%**	**38%**			
5	194	14	Surface	Chromium	5.21E+01			1.28E-06		1.28E-06	100%
5	194	14	Surface	Mercury	8.14E+00					0.00E+00	0%
5	**194**	**14**	**Surface**	**Totals**				**1.28E-06**		**1.28E-06**	
5	**194**	**14**	**Surface**	**Percent**				**100%**			
5	194	15	Surface	Chromium	5.33E+01			1.31E-06		1.31E-06	100%
5	194	15	Surface	Silver	1.03E+01					0.00E+00	0%
5	**194**	**15**	**Surface**	**Totals**				**1.31E-06**		**1.31E-06**	
5	**194**	**15**	**Surface**	**Percent**				**100%**			
5	194	16	Surface	Antimony	7.40E-01					0.00E+00	0%
5	194	16	Surface	Arsenic	1.15E+01	2.14E-05	6.30E-06	1.45E-08		2.78E-05	95%
5	194	16	Surface	Beryllium	8.70E-01			6.10E-10		6.10E-10	0%
5	194	16	Surface	Chromium	5.32E+01			1.31E-06		1.31E-06	4%
5	194	16	Surface	Nickel	7.20E+01			5.47E-09		5.47E-09	0%
5	194	16	Surface	Thallium	6.30E-01					0.00E+00	0%
5	194	16	Surface	Vanadium	4.11E+01					0.00E+00	0%
5	**194**	**16**	**Surface**	**Totals**		**2.14E-05**	**6.30E-06**	**1.33E-06**		**2.91E-05**	
5	**194**	**16**	**Surface**	**Percent**		**74%**	**22%**	**5%**			
5	194	17	Surface	Arsenic	1.16E+01	2.15E-05	6.32E-06	1.45E-08		2.78E-05	86%
5	194	17	Surface	Cadmium	1.10E+00			5.78E-10		5.78E-10	0%
5	194	17	Surface	Chromium	4.65E+01			1.14E-06		1.14E-06	4%
5	194	17	Surface	Total PAH	1.59E-01	1.44E-06	1.83E-06	3.03E-09		3.27E-06	10%
5	**194**	**17**	**Surface**	**Totals**		**2.29E-05**	**8.15E-06**	**1.16E-06**		**3.22E-05**	
5	**194**	**17**	**Surface**	**Percent**		**71%**	**25%**	**4%**			
5	194	18	Surface	Arsenic	1.06E+01	1.97E-05	5.78E-06	1.33E-08		2.55E-05	94%
5	194	18	Surface	Beryllium	7.40E-01			5.19E-10		5.19E-10	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	18	Surface	Chromium	6.85E+01			1.68E-06		1.68E-06	6%
5	194	18	Surface	Nickel	5.78E+01			4.39E-09		4.39E-09	0%
5	**194**	**18**	**Surface**	**Totals**		**1.97E-05**	**5.78E-06**	**1.70E-06**		**2.72E-05**	
5	**194**	**18**	**Surface**	**Percent**		**72%**	**21%**	**6%**			
5	194	19	Surface	Arsenic	1.07E+01	1.99E-05	5.85E-06	1.35E-08		2.58E-05	96%
5	194	19	Surface	Chromium	4.84E+01			1.19E-06		1.19E-06	4%
5	194	19	Surface	Nickel	5.84E+01			4.43E-09		4.43E-09	0%
5	**194**	**19**	**Surface**	**Totals**		**1.99E-05**	**5.85E-06**	**1.20E-06**		**2.70E-05**	
5	**194**	**19**	**Surface**	**Percent**		**74%**	**22%**	**4%**			
5	194	20	Surface	Arsenic	1.18E+01	2.20E-05	6.48E-06	1.49E-08		2.85E-05	93%
5	194	20	Surface	Barium	3.26E+02					0.00E+00	0%
5	194	20	Surface	Beryllium	1.10E+00			7.71E-10		7.71E-10	0%
5	194	20	Surface	Chromium	5.24E+01			1.28E-06		1.28E-06	4%
5	194	20	Surface	Cobalt	2.11E+01			5.54E-08		5.54E-08	0%
5	194	20	Surface	Manganese	2.29E+03					0.00E+00	0%
5	194	20	Surface	Mercury	7.28E+00					0.00E+00	0%
5	194	20	Surface	Nickel	6.57E+01			4.99E-09		4.99E-09	0%
5	194	20	Surface	Silver	1.22E+01					0.00E+00	0%
5	194	20	Surface	Total PAH	3.10E-02	2.81E-07	3.58E-07	5.93E-10		6.39E-07	2%
5	194	20	Surface	Vanadium	3.81E+01					0.00E+00	0%
5	**194**	**20**	**Surface**	**Totals**		**2.23E-05**	**6.83E-06**	**1.36E-06**		**3.05E-05**	
5	**194**	**20**	**Surface**	**Percent**		**73%**	**22%**	**4%**			
5	194	21	Surface	Antimony	9.30E-01					0.00E+00	0%
5	194	21	Surface	Chromium	5.51E+01			1.35E-06		1.35E-06	100%
5	194	21	Surface	Mercury	6.62E+00					0.00E+00	0%
5	194	21	Surface	Nickel	7.01E+01			5.32E-09		5.32E-09	0%
5	194	21	Surface	Thallium	6.40E-01					0.00E+00	0%
5	**194**	**21**	**Surface**	**Totals**				**1.36E-06**		**1.36E-06**	
5	**194**	**21**	**Surface**	**Percent**				**100%**			
5	194	22	Surface	Chromium	4.90E+01			1.20E-06		1.20E-06	2%
5	194	22	Surface	Manganese	8.19E+02					0.00E+00	0%
5	194	22	Surface	PCB, Total	1.09E+01	2.71E-05	3.72E-05	3.07E-06		6.73E-05	98%
5	**194**	**22**	**Surface**	**Totals**		**2.71E-05**	**3.72E-05**	**4.27E-06**		**6.85E-05**	
5	**194**	**22**	**Surface**	**Percent**		**40%**	**54%**	**6%**			
5	194	23	Surface	Arsenic	1.16E+01	2.15E-05	6.32E-06	1.45E-08		2.78E-05	94%
5	194	23	Surface	Chromium	6.60E+01			1.62E-06		1.62E-06	5%
5	194	23	Surface	Iron	1.83E+04					0.00E+00	0%
5	194	23	Surface	Nickel	8.77E+01			6.66E-09		6.66E-09	0%
5	194	23	Surface	Silver	1.15E+01					0.00E+00	0%
5	**194**	**23**	**Surface**	**Totals**		**2.15E-05**	**6.32E-06**	**1.64E-06**		**2.95E-05**	
5	**194**	**23**	**Surface**	**Percent**		**73%**	**21%**	**6%**			
5	194	24	Surface	Chromium	5.02E+01			1.23E-06		1.23E-06	72%
5	194	24	Surface	Nickel	7.08E+01			5.37E-09		5.37E-09	0%
5	194	24	Surface	Total PAH	2.28E-02	2.07E-07	2.63E-07	4.36E-10		4.70E-07	28%
5	**194**	**24**	**Surface**	**Totals**		**2.07E-07**	**2.63E-07**	**1.24E-06**		**1.71E-06**	
5	**194**	**24**	**Surface**	**Percent**		**12%**	**15%**	**72%**			
5	194	25	Surface	Barium	3.00E+02					0.00E+00	0%
5	194	25	Surface	Chromium	6.13E+01			1.50E-06		1.50E-06	78%
5	194	25	Surface	Manganese	9.96E+02					0.00E+00	0%
5	194	25	Surface	Nickel	6.33E+01			4.81E-09		4.81E-09	0%
5	194	25	Surface	Total PAH	2.06E-02	1.87E-07	2.38E-07	3.94E-10		4.25E-07	22%
5	**194**	**25**	**Surface**	**Totals**		**1.87E-07**	**2.38E-07**	**1.51E-06**		**1.93E-06**	
5	**194**	**25**	**Surface**	**Percent**		**10%**	**12%**	**78%**			
5	194	26	Surface	Beryllium	7.00E-01			4.90E-10		4.90E-10	0%
5	194	26	Surface	Chromium	4.18E+01			1.03E-06		1.03E-06	100%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	26	Surface	Silver	1.03E+01					0.00E+00	0%
5	194	26	Surface	Thallium	3.90E-01					0.00E+00	0%
5	**194**	**26**	**Surface**	**Totals**				**1.03E-06**		**1.03E-06**	
5	**194**	**26**	**Surface**	**Percent**				**100%**			
5	194	27	Surface	Chromium	5.22E+01			1.28E-06		1.28E-06	100%
5	194	27	Surface	Nickel	6.55E+01			4.97E-09		4.97E-09	0%
5	194	27	Surface	Silver	1.01E+01					0.00E+00	0%
5	**194**	**27**	**Surface**	**Totals**				**1.28E-06**		**1.28E-06**	
5	**194**	**27**	**Surface**	**Percent**				**100%**			
5	194	28	Surface	Arsenic	1.20E+01	2.24E-05	6.58E-06	1.52E-08		2.90E-05	95%
5	194	28	Surface	Beryllium	7.10E-01			4.98E-10		4.98E-10	0%
5	194	28	Surface	Chromium	6.07E+01			1.49E-06		1.49E-06	5%
5	194	28	Surface	Manganese	1.14E+03					0.00E+00	0%
5	194	28	Surface	Nickel	6.95E+01			5.27E-09		5.27E-09	0%
5	194	28	Surface	Silver	1.08E+01					0.00E+00	0%
5	194	28	Surface	Vanadium	4.06E+01					0.00E+00	0%
5	**194**	**28**	**Surface**	**Totals**		**2.24E-05**	**6.58E-06**	**1.51E-06**		**3.05E-05**	
5	**194**	**28**	**Surface**	**Percent**		**73%**	**22%**	**5%**			
5	194	29	Surface	Antimony	7.10E-01					0.00E+00	0%
5	194	29	Surface	Chromium	5.06E+01			1.24E-06		1.24E-06	100%
5	194	29	Surface	Nickel	6.51E+01			4.94E-09		4.94E-09	0%
5	194	29	Surface	Silver	9.77E+00					0.00E+00	0%
5	**194**	**29**	**Surface**	**Totals**				**1.24E-06**		**1.24E-06**	
5	**194**	**29**	**Surface**	**Percent**				**100%**			
5	194	30	Surface	Chromium	5.66E+01			1.39E-06		1.39E-06	100%
5	194	30	Surface	Mercury	8.80E+00					0.00E+00	0%
5	194	30	Surface	Nickel	6.99E+01			5.30E-09		5.30E-09	0%
5	194	30	Surface	Silver	9.76E+00					0.00E+00	0%
5	**194**	**30**	**Surface**	**Totals**				**1.39E-06**		**1.39E-06**	
5	**194**	**30**	**Surface**	**Percent**				**100%**			
5	194	31	Surface	Cesium-137	5.70E-01	5.48E-08		1.01E-12	4.89E-06	4.95E-06	77%
5	194	31	Surface	Uranium-238	1.72E+00	8.02E-07		2.40E-09	6.63E-07	1.47E-06	23%
5	**194**	**31**	**Surface**	**Totals**		**8.57E-07**		**2.40E-09**	**5.55E-06**	**6.41E-06**	
5	**194**	**31**	**Surface**	**Percent**		**13%**		**0%**	**87%**		
5	196	1	Surface	Antimony	5.90E-01					0.00E+00	0%
5	196	1	Surface	Chromium	1.96E+01			4.81E-07		4.81E-07	17%
5	196	1	Surface	Neptunium-237	3.11E-01	1.12E-07		8.21E-10	8.36E-07	9.49E-07	34%
5	196	1	Surface	Nickel	5.56E+02			4.22E-08		4.22E-08	2%
5	196	1	Surface	Uranium	2.33E+01					0.00E+00	0%
5	196	1	Surface	Uranium-238	1.54E+00	7.18E-07		2.15E-09	5.93E-07	1.31E-06	47%
5	**196**	**1**	**Surface**	**Totals**		**8.30E-07**		**5.26E-07**	**1.43E-06**	**2.79E-06**	
5	**196**	**1**	**Surface**	**Percent**		**30%**		**19%**	**51%**		
5	196	2	Surface	Barium	2.02E+02					0.00E+00	0%
5	196	2	Surface	Cadmium	2.53E+00			1.33E-09		1.33E-09	0%
5	196	2	Surface	Chromium	2.07E+01			5.08E-07		5.08E-07	2%
5	196	2	Surface	Nickel	7.36E+01			5.59E-09		5.59E-09	0%
5	196	2	Surface	PCB, Total	1.51E+00	3.75E-06	5.14E-06	4.25E-07		9.31E-06	36%
5	196	2	Surface	Total PAH	6.80E-01	6.16E-06	7.84E-06	1.30E-08		1.40E-05	54%
5	196	2	Surface	Uranium-238	2.21E+00	1.03E-06		3.08E-09	8.51E-07	1.88E-06	7%
5	**196**	**2**	**Surface**	**Totals**		**1.09E-05**	**1.30E-05**	**9.55E-07**	**8.51E-07**	**2.57E-05**	
5	**196**	**2**	**Surface**	**Percent**		**43%**	**50%**	**4%**	**3%**		
5	489	1	Surface	Chromium	4.16E+01			1.02E-06		1.02E-06	26%
5	489	1	Surface	Nickel	7.88E+01			5.98E-09		5.98E-09	0%
5	489	1	Surface	Total PAH	8.22E-02	7.45E-07	9.48E-07	1.57E-09		1.69E-06	43%
5	489	1	Surface	Uranium-238	1.47E+00	6.85E-07		2.05E-09	5.66E-07	1.25E-06	32%

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COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	**489**	**1**	**Surface**	**Totals**		**1.43E-06**	**9.48E-07**	**1.03E-06**	**5.66E-07**	**3.97E-06**	
5	**489**	**1**	**Surface**	**Percent**		**36%**	**24%**	**26%**	**14%**		
5	531	1	Surface	Antimony	1.00E+00					0.00E+00	0%
5	531	1	Surface	Arsenic	4.68E+01	8.72E-05	2.56E-05	5.90E-08		1.13E-04	95%
5	531	1	Surface	Cadmium	3.10E+00			1.63E-09		1.63E-09	0%
5	531	1	Surface	Chromium	5.05E+01			1.24E-06		1.24E-06	1%
5	531	1	Surface	Iron	5.68E+04					0.00E+00	0%
5	531	1	Surface	Nickel	1.62E+02			1.23E-08		1.23E-08	0%
5	531	1	Surface	Total PAH	5.34E-02	4.84E-07	6.16E-07	1.02E-09		1.10E-06	1%
5	531	1	Surface	Uranium	2.41E+01					0.00E+00	0%
5	531	1	Surface	Uranium-235	1.38E-01	4.99E-08		2.08E-10	2.53E-07	3.03E-07	0%
5	531	1	Surface	Uranium-238	3.48E+00	1.62E-06		4.85E-09	1.34E-06	2.97E-06	3%
5	531	1	Surface	Zinc	2.45E+03					0.00E+00	0%
5	**531**	**1**	**Surface**	**Totals**		**8.93E-05**	**2.62E-05**	**1.32E-06**	**1.59E-06**	**1.18E-04**	
5	**531**	**1**	**Surface**	**Percent**		**75%**	**22%**	**1%**	**1%**		
6	200	1	Surface	Antimony	5.60E-01					0.00E+00	0%
6	200	1	Surface	Cesium-137	5.74E-01	5.52E-08		1.02E-12	4.93E-06	4.98E-06	19%
6	200	1	Surface	Chromium	5.75E+01			1.41E-06		1.41E-06	5%
6	200	1	Surface	Mercury	6.71E+00					0.00E+00	0%
6	200	1	Surface	Nickel	1.28E+02			9.72E-09		9.72E-09	0%
6	200	1	Surface	PCB, Total	2.60E+00	6.45E-06	8.85E-06	7.31E-07		1.60E-05	61%
6	200	1	Surface	Total PAH	2.84E-02	2.57E-07	3.28E-07	5.43E-10		5.85E-07	2%
6	200	1	Surface	Uranium	2.73E+01					0.00E+00	0%
6	200	1	Surface	Uranium-235	1.43E-01	5.17E-08		2.15E-10	2.62E-07	3.14E-07	1%
6	200	1	Surface	Uranium-238	3.58E+00	1.67E-06		4.99E-09	1.38E-06	3.05E-06	12%
6	**200**	**1**	**Surface**	**Totals**		**8.49E-06**	**9.18E-06**	**2.16E-06**	**6.57E-06**	**2.64E-05**	
6	**200**	**1**	**Surface**	**Percent**		**32%**	**35%**	**8%**	**25%**		
6	212	1	Surface	Arsenic	1.44E+01	2.68E-05	7.89E-06	1.82E-08		3.48E-05	19%
6	212	1	Surface	Beryllium	8.10E-01			5.68E-10		5.68E-10	0%
6	212	1	Surface	Cesium-137	6.01E-01	5.78E-08		1.07E-12	5.16E-06	5.22E-06	3%
6	212	1	Surface	Chromium	3.58E+01			8.78E-07		8.78E-07	0%
6	212	1	Surface	Cobalt-60	8.76E-03	7.84E-10		4.68E-14	3.67E-07	3.68E-07	0%
6	212	1	Surface	Iron	4.14E+04					0.00E+00	0%
6	212	1	Surface	Neptunium-237	4.00E+00	1.44E-06		1.06E-08	1.08E-05	1.22E-05	7%
6	212	1	Surface	Nickel	8.69E+01			6.60E-09		6.60E-09	0%
6	212	1	Surface	PCB, Total	1.80E-01	4.47E-07	6.13E-07	5.06E-08		1.11E-06	1%
6	212	1	Surface	Plutonium-239/240	6.71E+00	4.11E-06		3.33E-08	4.53E-09	4.15E-06	2%
6	212	1	Surface	Thorium-230	2.60E+02	1.17E-04		1.11E-06	7.20E-07	1.18E-04	66%
6	212	1	Surface	Uranium	2.30E+01					0.00E+00	0%
6	212	1	Surface	Uranium-235	2.09E-01	7.56E-08		3.15E-10	3.83E-07	4.59E-07	0%
6	212	1	Surface	Uranium-238	3.17E+00	1.48E-06		4.42E-09	1.22E-06	2.70E-06	1%
6	**212**	**1**	**Surface**	**Totals**		**1.51E-04**	**8.50E-06**	**2.11E-06**	**1.86E-05**	**1.80E-04**	
6	**212**	**1**	**Surface**	**Percent**		**84%**	**5%**	**1%**	**10%**		
6	213	1	Surface	Antimony	8.50E-01					0.00E+00	0%
6	213	1	Surface	Chromium	4.78E+01			1.17E-06		1.17E-06	16%
6	213	1	Surface	Nickel	6.67E+01			5.07E-09		5.07E-09	0%
6	213	1	Surface	PCB, Total	7.30E-02	1.81E-07	2.48E-07	2.05E-08		4.50E-07	6%
6	213	1	Surface	Silver	1.32E+01					0.00E+00	0%
6	213	1	Surface	Total PAH	1.72E-01	1.56E-06	1.98E-06	3.29E-09		3.54E-06	49%
6	213	1	Surface	Uranium-238	2.33E+00	1.09E-06		3.25E-09	8.98E-07	1.99E-06	28%
6	**213**	**1**	**Surface**	**Totals**		**2.82E-06**	**2.23E-06**	**1.20E-06**	**8.98E-07**	**7.16E-06**	
6	**213**	**1**	**Surface**	**Percent**		**39%**	**31%**	**17%**	**13%**		
6	213	2	Surface	Chromium	4.48E+01			1.10E-06		1.10E-06	99%
6	213	2	Surface	Nickel	9.10E+01			6.91E-09		6.91E-09	1%
6	213	2	Surface	Silver	1.13E+01					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	**213**	**2**	**Surface**	**Totals**				**1.11E-06**		**1.11E-06**	
6	**213**	**2**	**Surface**	**Percent**				**100%**			
6	214	1	Surface	Antimony	5.70E-01					0.00E+00	
6	**214**	**1**	**Surface**	**Totals**						**0.00E+00**	
6	**214**	**1**	**Surface**	**Percent**							
6	215	1	Surface	Antimony	6.80E-01					0.00E+00	0%
6	215	1	Surface	Chromium	5.73E+01			1.41E-06		1.41E-06	46%
6	215	1	Surface	Iron	3.87E+04					0.00E+00	0%
6	215	1	Surface	Nickel	7.32E+01			5.55E-09		5.55E-09	0%
6	215	1	Surface	Total PAH	8.09E-02	7.33E-07	9.33E-07	1.55E-09		1.67E-06	54%
6	**215**	**1**	**Surface**	**Totals**		**7.33E-07**	**9.33E-07**	**1.41E-06**		**3.08E-06**	
6	**215**	**1**	**Surface**	**Percent**		**24%**	**30%**	**46%**			
6	216	1	Surface	Chromium	2.38E+01			5.84E-07		5.84E-07	12%
6	216	1	Surface	Total PAH	1.49E-01	1.35E-06	1.72E-06	2.86E-09		3.08E-06	64%
6	216	1	Surface	Uranium-238	1.33E+00	6.20E-07		1.86E-09	5.12E-07	1.13E-06	24%
6	**216**	**1**	**Surface**	**Totals**		**1.97E-06**	**1.72E-06**	**5.88E-07**	**5.12E-07**	**4.80E-06**	
6	**216**	**1**	**Surface**	**Percent**		**41%**	**36%**	**12%**	**11%**		
6	217	1	Surface	Chromium	8.58E+01			2.10E-06		2.10E-06	67%
6	217	1	Surface	Cobalt	1.96E+01			5.14E-08		5.14E-08	2%
6	217	1	Surface	Manganese	7.70E+02					0.00E+00	0%
6	217	1	Surface	Nickel	8.54E+01			6.48E-09		6.48E-09	0%
6	217	1	Surface	Silver	1.35E+01					0.00E+00	0%
6	217	1	Surface	Uranium-238	1.15E+00	5.38E-07		1.61E-09	4.45E-07	9.84E-07	31%
6	**217**	**1**	**Surface**	**Totals**		**5.38E-07**		**2.16E-06**	**4.45E-07**	**3.15E-06**	
6	**217**	**1**	**Surface**	**Percent**		**17%**		**69%**	**14%**		
6	217	2	Surface	Antimony	1.70E+00					0.00E+00	0%
6	217	2	Surface	Arsenic	1.12E+01	2.08E-05	6.10E-06	1.41E-08		2.69E-05	67%
6	217	2	Surface	Chromium	1.02E+02			2.49E-06		2.49E-06	6%
6	217	2	Surface	Cobalt	1.74E+01			4.57E-08		4.57E-08	0%
6	217	2	Surface	Iron	3.09E+04					0.00E+00	0%
6	217	2	Surface	Manganese	8.44E+02					0.00E+00	0%
6	217	2	Surface	Mercury	8.59E+00					0.00E+00	0%
6	217	2	Surface	Nickel	9.74E+01			7.39E-09		7.39E-09	0%
6	217	2	Surface	Silver	1.61E+01					0.00E+00	0%
6	217	2	Surface	Total PAH	5.05E-01	4.58E-06	5.82E-06	9.66E-09		1.04E-05	26%
6	**217**	**2**	**Surface**	**Totals**		**2.54E-05**	**1.19E-05**	**2.57E-06**		**3.99E-05**	
6	**217**	**2**	**Surface**	**Percent**		**64%**	**30%**	**6%**			
6	221	1	Surface	Barium	2.21E+02					0.00E+00	0%
6	221	1	Surface	Chromium	7.01E+01			1.72E-06		1.72E-06	6%
6	221	1	Surface	Iron	1.90E+04					0.00E+00	0%
6	221	1	Surface	Nickel	7.93E+01			6.02E-09		6.02E-09	0%
6	221	1	Surface	PCB, Total	5.00E-01	1.24E-06	1.70E-06	1.41E-07		3.08E-06	11%
6	221	1	Surface	Total PAH	1.02E+00	9.27E-06	1.18E-05	1.96E-08		2.11E-05	77%
6	221	1	Surface	Uranium	1.64E+01					0.00E+00	0%
6	221	1	Surface	Uranium-238	1.93E+00	9.00E-07		2.69E-09	7.43E-07	1.65E-06	6%
6	**221**	**1**	**Surface**	**Totals**		**1.14E-05**	**1.35E-05**	**1.89E-06**	**7.43E-07**	**2.75E-05**	
6	**221**	**1**	**Surface**	**Percent**		**41%**	**49%**	**7%**	**3%**		
6	222	1	Surface	Chromium	4.73E+01			1.16E-06		1.16E-06	3%
6	222	1	Surface	Nickel	9.19E+01			6.98E-09		6.98E-09	0%
6	222	1	Surface	PCB, Total	1.40E+00	3.48E-06	4.76E-06	3.94E-07		8.63E-06	24%
6	222	1	Surface	Total PAH	1.77E-01	1.61E-06	2.04E-06	3.39E-09		3.65E-06	10%
6	222	1	Surface	Uranium	2.80E+01					0.00E+00	0%
6	222	1	Surface	Uranium-234	1.04E+01	3.65E-06		1.77E-08	8.86E-09	3.67E-06	10%
6	222	1	Surface	Uranium-235	7.10E-01	2.57E-07		1.07E-09	1.30E-06	1.56E-06	4%
6	222	1	Surface	Uranium-238	1.96E+01	9.14E-06		2.73E-08	7.55E-06	1.67E-05	47%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	**222**	**1**	**Surface**	**Totals**		**1.81E-05**	**6.81E-06**	**1.61E-06**	**8.86E-06**	**3.54E-05**	
6	**222**	**1**	**Surface**	**Percent**		**51%**	**19%**	**5%**	**25%**		
6	227	1	Surface	Beryllium	5.52E-01			3.87E-10		3.87E-10	0%
6	227	1	Surface	Cesium-137	1.90E-01	1.83E-08		3.37E-13	1.63E-06	1.65E-06	2%
6	227	1	Surface	Chromium	4.71E+01			1.16E-06		1.16E-06	1%
6	227	1	Surface	Cobalt-60	1.53E-02	1.37E-09		8.17E-14	6.41E-07	6.42E-07	1%
6	227	1	Surface	Neptunium-237	9.05E-01	3.25E-07		2.39E-09	2.43E-06	2.76E-06	3%
6	227	1	Surface	Nickel	2.03E+02			1.54E-08		1.54E-08	0%
6	227	1	Surface	PCB, Total	4.14E+00	1.03E-05	1.41E-05	1.17E-06		2.55E-05	29%
6	227	1	Surface	Technetium-99	4.77E+01	8.11E-07		1.00E-10	1.31E-08	8.25E-07	1%
6	227	1	Surface	Total PAH	3.38E-01	3.06E-06	3.90E-06	6.46E-09		6.96E-06	8%
6	227	1	Surface	Uranium	1.02E+02					0.00E+00	0%
6	227	1	Surface	Uranium-234	1.54E+01	5.42E-06		2.63E-08	1.31E-08	5.46E-06	6%
6	227	1	Surface	Uranium-235	1.49E+00	5.39E-07		2.25E-09	2.73E-06	3.28E-06	4%
6	227	1	Surface	Uranium-238	4.63E+01	2.16E-05		6.46E-08	1.78E-05	3.95E-05	45%
6	**227**	**1**	**Surface**	**Totals**		**4.20E-05**	**1.80E-05**	**2.44E-06**	**2.53E-05**	**8.78E-05**	
6	**227**	**1**	**Surface**	**Percent**		**48%**	**21%**	**3%**	**29%**		
6	227	2	Surface	Beryllium	5.32E-01			3.73E-10		3.73E-10	0%
6	227	2	Surface	Chromium	5.63E+01			1.38E-06		1.38E-06	3%
6	227	2	Surface	Cobalt	8.99E+00			2.36E-08		2.36E-08	0%
6	227	2	Surface	Cobalt-60	1.37E-02	1.23E-09		7.32E-14	5.74E-07	5.75E-07	1%
6	227	2	Surface	Mercury	8.41E+00					0.00E+00	0%
6	227	2	Surface	Nickel	1.25E+02			9.48E-09		9.48E-09	0%
6	227	2	Surface	PCB, Total	5.82E+00	1.45E-05	1.98E-05	1.64E-06		3.59E-05	86%
6	227	2	Surface	Total PAH	1.16E-01	1.05E-06	1.33E-06	2.21E-09		2.38E-06	6%
6	227	2	Surface	Uranium	1.51E+01					0.00E+00	0%
6	227	2	Surface	Uranium-238	1.57E+00	7.33E-07		2.19E-09	6.06E-07	1.34E-06	3%
6	**227**	**2**	**Surface**	**Totals**		**1.62E-05**	**2.11E-05**	**3.06E-06**	**1.18E-06**	**4.16E-05**	
6	**227**	**2**	**Surface**	**Percent**		**39%**	**51%**	**7%**	**3%**		
6	228	1	Surface	Antimony	6.30E-01					0.00E+00	0%
6	228	1	Surface	Cadmium	3.90E+00			2.05E-09		2.05E-09	0%
6	228	1	Surface	Chromium	1.89E+02			4.63E-06		4.63E-06	38%
6	228	1	Surface	Mercury	9.37E+00					0.00E+00	0%
6	228	1	Surface	Neptunium-237	8.00E-01	2.88E-07		2.11E-09	2.15E-06	2.44E-06	20%
6	228	1	Surface	Nickel	7.92E+01			6.01E-09		6.01E-09	0%
6	228	1	Surface	Silver	1.16E+01					0.00E+00	0%
6	228	1	Surface	Total PAH	6.69E-02	6.06E-07	7.71E-07	1.28E-09		1.38E-06	11%
6	228	1	Surface	Uranium	1.51E+01					0.00E+00	0%
6	228	1	Surface	Uranium-235	1.78E-01	6.44E-08		2.68E-10	3.27E-07	3.91E-07	3%
6	228	1	Surface	Uranium-238	3.77E+00	1.76E-06		5.26E-09	1.45E-06	3.22E-06	27%
6	**228**	**1**	**Surface**	**Totals**		**2.72E-06**	**7.71E-07**	**4.65E-06**	**3.93E-06**	**1.21E-05**	
6	**228**	**1**	**Surface**	**Percent**		**23%**	**6%**	**39%**	**33%**		
7	76	1	Surface	Barium	2.69E+02					0.00E+00	0%
7	76	1	Surface	PCB, Total	2.60E-01	6.45E-07	8.85E-07	7.31E-08		1.60E-06	4%
7	76	1	Surface	Total PAH	1.76E+00	1.59E-05	2.03E-05	3.36E-08		3.62E-05	93%
7	76	1	Surface	Uranium-238	1.45E+00	6.76E-07		2.02E-09	5.59E-07	1.24E-06	3%
7	**76**	**1**	**Surface**	**Totals**		**1.73E-05**	**2.12E-05**	**1.09E-07**	**5.59E-07**	**3.91E-05**	
7	**76**	**1**	**Surface**	**Percent**		**44%**	**54%**	**0%**	**1%**		
7	165	1	Surface	Antimony	2.20E+00					0.00E+00	0%
7	165	1	Surface	Arsenic	6.35E+01	1.18E-04	3.47E-05	8.00E-08		1.53E-04	43%
7	165	1	Surface	Barium	5.84E+02					0.00E+00	0%
7	165	1	Surface	Beryllium	6.82E-01			4.78E-10		4.78E-10	0%
7	165	1	Surface	Cesium-137	3.47E+00	3.34E-07		6.16E-12	2.98E-05	3.01E-05	8%
7	165	1	Surface	Chromium	3.74E+01			9.17E-07		9.17E-07	0%
7	165	1	Surface	Mercury	3.78E-01					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
7	165	1	Surface	Naphthalene	1.61E+00			5.33E-07		5.33E-07	0%
7	165	1	Surface	Neptunium-237	4.26E-01	1.53E-07		1.12E-09	1.15E-06	1.30E-06	0%
7	165	1	Surface	Nickel	3.47E+01			2.63E-09		2.63E-09	0%
7	165	1	Surface	PCB, Total	8.27E+00	2.05E-05	2.81E-05	2.33E-06		5.10E-05	14%
7	165	1	Surface	Plutonium-239/240	2.81E+00	1.72E-06		1.39E-08	1.90E-09	1.73E-06	0%
7	165	1	Surface	Silver	3.09E+01					0.00E+00	0%
7	165	1	Surface	Thorium-230	6.02E+00	2.70E-06		2.56E-08	1.67E-08	2.74E-06	1%
7	165	1	Surface	Total PAH	1.87E+00	1.69E-05	2.15E-05	3.57E-08		3.85E-05	11%
7	165	1	Surface	Uranium	1.08E+02					0.00E+00	0%
7	165	1	Surface	Uranium-234	5.76E+01	2.02E-05		9.79E-08	4.90E-08	2.03E-05	6%
7	165	1	Surface	Uranium-235	2.05E+00	7.40E-07		3.08E-09	3.75E-06	4.50E-06	1%
7	165	1	Surface	Uranium-238	6.41E+01	2.99E-05		8.94E-08	2.47E-05	5.47E-05	15%
7	**165**	**1**	**Surface**	**Totals**		**2.11E-04**	**8.44E-05**	**4.13E-06**	**5.94E-05**	**3.59E-04**	
7	**165**	**1**	**Surface**	**Percent**		**59%**	**23%**	**1%**	**17%**		
7	170	1	Surface	Neptunium-237	1.15E-01	4.14E-08		3.04E-10	3.09E-07	3.51E-07	21%
7	170	1	Surface	Uranium-238	1.53E+00	7.13E-07		2.13E-09	5.89E-07	1.30E-06	79%
7	**170**	**1**	**Surface**	**Totals**		**7.55E-07**		**2.44E-09**	**8.99E-07**	**1.66E-06**	
7	**170**	**1**	**Surface**	**Percent**		**46%**		**0%**	**54%**		
8	158	1	Surface	Antimony	5.23E-01					0.00E+00	0%
8	158	1	Surface	Arsenic	1.01E+01	1.88E-05	5.53E-06	1.27E-08		2.44E-05	66%
8	158	1	Surface	Barium	2.19E+02					0.00E+00	0%
8	158	1	Surface	Chromium	6.07E+01			1.49E-06		1.49E-06	4%
8	158	1	Surface	Cobalt	1.62E+01			4.26E-08		4.26E-08	0%
8	158	1	Surface	Manganese	9.91E+02					0.00E+00	0%
8	158	1	Surface	Mercury	1.05E+01					0.00E+00	0%
8	158	1	Surface	Nickel	7.28E+01			5.53E-09		5.53E-09	0%
8	158	1	Surface	Thallium	3.12E-01					0.00E+00	0%
8	158	1	Surface	Total PAH	3.69E-01	3.34E-06	4.26E-06	7.06E-09		7.61E-06	20%
8	158	1	Surface	Uranium	2.03E+01					0.00E+00	0%
8	158	1	Surface	Uranium-235	1.63E-01	5.90E-08		2.46E-10	2.99E-07	3.58E-07	1%
8	158	1	Surface	Uranium-238	3.79E+00	1.77E-06		5.29E-09	1.46E-06	3.23E-06	9%
8	**158**	**1**	**Surface**	**Totals**		**2.40E-05**	**9.79E-06**	**1.56E-06**	**1.76E-06**	**3.71E-05**	
8	**158**	**1**	**Surface**	**Percent**		**65%**	**26%**	**4%**	**5%**		
8	169	1	Surface	Aluminum	1.42E+04					0.00E+00	0%
8	169	1	Surface	Antimony	1.30E+00					0.00E+00	0%
8	169	1	Surface	Arsenic	2.03E+01	3.78E-05	1.11E-05	2.56E-08		4.89E-05	22%
8	169	1	Surface	Beryllium	8.00E-01			5.61E-10		5.61E-10	0%
8	169	1	Surface	Chromium	2.15E+02			5.27E-06		5.27E-06	2%
8	169	1	Surface	Copper	3.74E+02					0.00E+00	0%
8	169	1	Surface	Iron	4.16E+04					0.00E+00	0%
8	169	1	Surface	Mercury	7.87E+00					0.00E+00	0%
8	169	1	Surface	Nickel	5.49E+02			4.16E-08		4.16E-08	0%
8	169	1	Surface	PCB, Total	1.00E+01	2.48E-05	3.40E-05	2.81E-06		6.17E-05	28%
8	169	1	Surface	Thallium	4.60E-01					0.00E+00	0%
8	169	1	Surface	Total PAH	4.59E+00	4.16E-05	5.29E-05	8.77E-08		9.45E-05	43%
8	169	1	Surface	Uranium	5.03E+01					0.00E+00	0%
8	169	1	Surface	Uranium-234	6.55E+00	2.30E-06		1.11E-08	5.58E-09	2.31E-06	1%
8	169	1	Surface	Uranium-235	4.60E-01	1.66E-07		6.93E-10	8.44E-07	1.01E-06	0%
8	169	1	Surface	Uranium-238	8.12E+00	3.79E-06		1.13E-08	3.13E-06	6.92E-06	3%
8	**169**	**1**	**Surface**	**Totals**		**1.10E-04**	**9.80E-05**	**8.26E-06**	**3.98E-06**	**2.21E-04**	
8	**169**	**1**	**Surface**	**Percent**		**50%**	**44%**	**4%**	**2%**		
9	19	1	Surface	Beryllium	1.10E+00			7.71E-10		7.71E-10	0%
9	19	1	Surface	Cadmium	1.20E+00			6.31E-10		6.31E-10	0%
9	19	1	Surface	Thallium	9.80E-01					0.00E+00	0%
9	19	1	Surface	Total PAH	5.23E+00	4.74E-05	6.03E-05	9.99E-08		1.08E-04	100%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**19**	**1**	**Surface**	**Totals**		**4.74E-05**	**6.03E-05**	**1.01E-07**		**1.08E-04**	
9	**19**	**1**	**Surface**	**Percent**		**44%**	**56%**	**0%**			
9	138	1	Surface	Antimony	5.39E+00					0.00E+00	0%
9	138	1	Surface	Arsenic	1.06E+01	1.98E-05	5.81E-06	1.34E-08		2.56E-05	80%
9	138	1	Surface	Cadmium	5.42E+00			2.85E-09		2.85E-09	0%
9	138	1	Surface	Chromium	5.39E+01			1.32E-06		1.32E-06	4%
9	138	1	Surface	Mercury	1.30E+01					0.00E+00	0%
9	138	1	Surface	Nickel	7.04E+01			5.34E-09		5.34E-09	0%
9	138	1	Surface	PCB, Total	5.00E-01	1.24E-06	1.70E-06	1.41E-07		3.08E-06	10%
9	138	1	Surface	Silver	1.01E+01					0.00E+00	0%
9	138	1	Surface	Total PAH	9.74E-02	8.83E-07	1.12E-06	1.86E-09		2.01E-06	6%
9	**138**	**1**	**Surface**	**Totals**		**2.19E-05**	**8.63E-06**	**1.48E-06**		**3.20E-05**	
9	**138**	**1**	**Surface**	**Percent**		**68%**	**27%**	**5%**			
9	138	2	Surface	Nickel	7.99E+01			6.06E-09		6.06E-09	0%
9	138	2	Surface	PCB, Total	9.20E-02	2.28E-07	3.13E-07	2.59E-08		5.67E-07	42%
9	138	2	Surface	Silver	1.04E+01					0.00E+00	0%
9	138	2	Surface	Total PAH	3.84E-02	3.48E-07	4.43E-07	7.34E-10		7.92E-07	58%
9	**138**	**2**	**Surface**	**Totals**		**5.76E-07**	**7.56E-07**	**3.27E-08**		**1.37E-06**	
9	**138**	**2**	**Surface**	**Percent**		**42%**	**55%**	**2%**			
9	180	1	Surface	Antimony	5.80E-01					0.00E+00	0%
9	180	1	Surface	Arsenic	7.48E+01	1.39E-04	4.09E-05	9.42E-08		1.80E-04	99%
9	180	1	Surface	Chromium	5.54E+01			1.36E-06		1.36E-06	1%
9	180	1	Surface	Mercury	8.28E+00					0.00E+00	0%
9	180	1	Surface	Nickel	8.77E+01			6.66E-09		6.66E-09	0%
9	**180**	**1**	**Surface**	**Totals**		**1.39E-04**	**4.09E-05**	**1.46E-06**		**1.82E-04**	
9	**180**	**1**	**Surface**	**Percent**		**77%**	**23%**	**1%**			
9	180	2	Surface	Antimony	4.58E-01					0.00E+00	0%
9	180	2	Surface	Arsenic	1.27E+01	2.36E-05	6.92E-06	1.59E-08		3.05E-05	91%
9	180	2	Surface	Chromium	4.46E+01			1.09E-06		1.09E-06	3%
9	180	2	Surface	Nickel	8.42E+01			6.39E-09		6.39E-09	0%
9	180	2	Surface	Total PAH	9.19E-02	8.32E-07	1.06E-06	1.76E-09		1.89E-06	6%
9	**180**	**2**	**Surface**	**Totals**		**2.44E-05**	**7.98E-06**	**1.12E-06**		**3.35E-05**	
9	**180**	**2**	**Surface**	**Percent**		**73%**	**24%**	**3%**			
9	180	3	Surface	Arsenic	1.34E+01	2.49E-05	7.30E-06	1.68E-08		3.22E-05	97%
9	180	3	Surface	Chromium	4.69E+01			1.15E-06		1.15E-06	3%
9	180	3	Surface	Nickel	6.77E+01			5.14E-09		5.14E-09	0%
9	180	3	Surface	Silver	1.14E+01					0.00E+00	0%
9	**180**	**3**	**Surface**	**Totals**		**2.49E-05**	**7.30E-06**	**1.17E-06**		**3.33E-05**	
9	**180**	**3**	**Surface**	**Percent**		**75%**	**22%**	**4%**			
9	180	4	Surface	Arsenic	1.15E+01	2.15E-05	6.31E-06	1.45E-08		2.78E-05	94%
9	180	4	Surface	Barium	2.13E+02					0.00E+00	0%
9	180	4	Surface	Beryllium	1.60E+00			1.12E-09		1.12E-09	0%
9	180	4	Surface	Chromium	6.00E+01			1.47E-06		1.47E-06	5%
9	180	4	Surface	Iron	1.54E+04					0.00E+00	0%
9	180	4	Surface	Manganese	7.09E+02					0.00E+00	0%
9	180	4	Surface	Nickel	6.46E+01			4.90E-09		4.90E-09	0%
9	180	4	Surface	Silver	9.68E+00					0.00E+00	0%
9	180	4	Surface	Total PAH	2.15E-02	1.95E-07	2.48E-07	4.11E-10		4.43E-07	1%
9	180	4	Surface	Vanadium	4.85E+01					0.00E+00	0%
9	**180**	**4**	**Surface**	**Totals**		**2.17E-05**	**6.55E-06**	**1.49E-06**		**2.97E-05**	
9	**180**	**4**	**Surface**	**Percent**		**73%**	**22%**	**5%**			
9	181	1	Surface	Chromium	2.29E+01			5.60E-07		5.60E-07	44%
9	181	1	Surface	Thallium	3.50E+00					0.00E+00	0%
9	181	1	Surface	Total PAH	3.43E-02	3.11E-07	3.96E-07	6.56E-10		7.07E-07	56%
9	**181**	**1**	**Surface**	**Totals**		**3.11E-07**	**3.96E-07**	**5.61E-07**		**1.27E-06**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**181**	**1**	**Surface**	**Percent**		**25%**	**31%**	**44%**			
9	195	1	Surface	Chromium	6.33E+01			1.55E-06		1.55E-06	100%
9	195	1	Surface	Nickel	7.02E+01			5.33E-09		5.33E-09	0%
9	195	1	Surface	Silver	9.37E+00					0.00E+00	0%
9	**195**	**1**	**Surface**	**Totals**				**1.56E-06**		**1.56E-06**	
9	**195**	**1**	**Surface**	**Percent**				**100%**			
9	195	2	Surface	Chromium	4.52E+01			1.11E-06		1.11E-06	67%
9	195	2	Surface	Silver	9.48E+00					0.00E+00	0%
9	195	2	Surface	Total PAH	2.68E-02	2.43E-07	3.09E-07	5.12E-10		5.52E-07	33%
9	**195**	**2**	**Surface**	**Totals**		**2.43E-07**	**3.09E-07**	**1.11E-06**		**1.66E-06**	
9	**195**	**2**	**Surface**	**Percent**		**15%**	**19%**	**67%**			
9	195	3	Surface	Chromium	5.03E+01			1.23E-06		1.23E-06	59%
9	195	3	Surface	Nickel	5.22E+01			3.96E-09		3.96E-09	0%
9	195	3	Surface	Total PAH	4.06E-02	3.68E-07	4.68E-07	7.76E-10		8.37E-07	40%
9	**195**	**3**	**Surface**	**Totals**		**3.68E-07**	**4.68E-07**	**1.24E-06**		**2.07E-06**	
9	**195**	**3**	**Surface**	**Percent**		**18%**	**23%**	**60%**			
9	195	4	Surface	Chromium	5.29E+01			1.30E-06		1.30E-06	100%
9	195	4	Surface	Nickel	6.23E+01			4.73E-09		4.73E-09	0%
9	**195**	**4**	**Surface**	**Totals**				**1.30E-06**		**1.30E-06**	
9	**195**	**4**	**Surface**	**Percent**				**100%**			
9	195	5	Surface	Chromium	5.74E+01			1.41E-06		1.41E-06	74%
9	195	5	Surface	Nickel	8.11E+01			6.16E-09		6.16E-09	0%
9	195	5	Surface	Total PAH	2.40E-02	2.17E-07	2.77E-07	4.59E-10		4.95E-07	26%
9	**195**	**5**	**Surface**	**Totals**		**2.17E-07**	**2.77E-07**	**1.41E-06**		**1.91E-06**	
9	**195**	**5**	**Surface**	**Percent**		**11%**	**15%**	**74%**			
9	195	6	Surface	Chromium	4.45E+01			1.09E-06		1.09E-06	18%
9	195	6	Surface	Nickel	8.71E+01			6.61E-09		6.61E-09	0%
9	195	6	Surface	Total PAH	2.48E-01	2.24E-06	2.86E-06	4.74E-09		5.11E-06	82%
9	**195**	**6**	**Surface**	**Totals**		**2.24E-06**	**2.86E-06**	**1.10E-06**		**6.21E-06**	
9	**195**	**6**	**Surface**	**Percent**		**36%**	**46%**	**18%**			
9	195	7	Surface	Chromium	4.93E+01			1.21E-06		1.21E-06	100%
9	195	7	Surface	Silver	8.06E+00					0.00E+00	0%
9	**195**	**7**	**Surface**	**Totals**				**1.21E-06**		**1.21E-06**	
9	**195**	**7**	**Surface**	**Percent**				**100%**			
9	195	8	Surface	Arsenic	1.16E+01	2.15E-05	6.32E-06	1.46E-08		2.79E-05	82%
9	195	8	Surface	Beryllium	7.40E-01			5.19E-10		5.19E-10	0%
9	195	8	Surface	Chromium	6.79E+01			1.67E-06		1.67E-06	5%
9	195	8	Surface	Cobalt	1.82E+01			4.78E-08		4.78E-08	0%
9	195	8	Surface	Nickel	7.01E+01			5.32E-09		5.32E-09	0%
9	195	8	Surface	Total PAH	2.16E-01	1.95E-06	2.49E-06	4.12E-09		4.44E-06	13%
9	195	8	Surface	Vanadium	4.04E+01					0.00E+00	0%
9	**195**	**8**	**Surface**	**Totals**		**2.35E-05**	**8.81E-06**	**1.74E-06**		**3.40E-05**	
9	**195**	**8**	**Surface**	**Percent**		**69%**	**26%**	**5%**			
9	195	9	Surface	Chromium	6.08E+01			1.49E-06		1.49E-06	100%
9	195	9	Surface	Nickel	7.93E+01			6.02E-09		6.02E-09	0%
9	**195**	**9**	**Surface**	**Totals**				**1.50E-06**		**1.50E-06**	
9	**195**	**9**	**Surface**	**Percent**				**100%**			
9	195	10	Surface	Chromium	4.51E+01			1.11E-06		1.11E-06	99%
9	195	10	Surface	Nickel	7.40E+01			5.62E-09		5.62E-09	1%
9	195	10	Surface	Silver	1.31E+01					0.00E+00	0%
9	**195**	**10**	**Surface**	**Totals**				**1.11E-06**		**1.11E-06**	
9	**195**	**10**	**Surface**	**Percent**				**100%**			
9	195	11	Surface	Aluminum	2.81E+04					0.00E+00	0%
9	195	11	Surface	Arsenic	1.35E+01	2.51E-05	7.36E-06	1.70E-08		3.24E-05	96%
9	195	11	Surface	Barium	4.53E+02					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	195	11	Surface	Chromium	5.05E+01			1.24E-06		1.24E-06	4%
9	195	11	Surface	Cobalt	2.77E+01			7.28E-08		7.28E-08	0%
9	195	11	Surface	Iron	1.97E+04					0.00E+00	0%
9	195	11	Surface	Nickel	6.77E+01			5.14E-09		5.14E-09	0%
9	195	11	Surface	Thallium	6.60E-01					0.00E+00	0%
9	195	11	Surface	Vanadium	7.97E+01					0.00E+00	0%
9	**195**	**11**	**Surface**	**Totals**		**2.51E-05**	**7.36E-06**	**1.33E-06**		**3.38E-05**	
9	**195**	**11**	**Surface**	**Percent**		**74%**	**22%**	**4%**			
9	195	12	Surface	Beryllium	7.50E-01			5.26E-10		5.26E-10	0%
9	195	12	Surface	Chromium	7.04E+01			1.73E-06		1.73E-06	100%
9	195	12	Surface	Nickel	6.78E+01			5.14E-09		5.14E-09	0%
9	**195**	**12**	**Surface**	**Totals**				**1.73E-06**		**1.73E-06**	
9	**195**	**12**	**Surface**	**Percent**				**100%**			
9	195	13	Surface	Chromium	6.55E+01			1.61E-06		1.61E-06	100%
9	195	13	Surface	Nickel	6.91E+01			5.24E-09		5.24E-09	0%
9	**195**	**13**	**Surface**	**Totals**				**1.61E-06**		**1.61E-06**	
9	**195**	**13**	**Surface**	**Percent**				**100%**			
9	195	14	Surface	Chromium	5.94E+01			1.46E-06		1.46E-06	100%
9	195	14	Surface	Nickel	7.04E+01			5.34E-09		5.34E-09	0%
9	**195**	**14**	**Surface**	**Totals**				**1.46E-06**		**1.46E-06**	
9	**195**	**14**	**Surface**	**Percent**				**100%**			
9	195	15	Surface	Chromium	4.82E+01			1.18E-06		1.18E-06	100%
9	**195**	**15**	**Surface**	**Totals**				**1.18E-06**		**1.18E-06**	
9	**195**	**15**	**Surface**	**Percent**				**100%**			
9	195	16	Surface	Chromium	4.45E+01			1.09E-06		1.09E-06	99%
9	195	16	Surface	Nickel	8.16E+01			6.19E-09		6.19E-09	1%
9	**195**	**16**	**Surface**	**Totals**				**1.10E-06**		**1.10E-06**	
9	**195**	**16**	**Surface**	**Percent**				**100%**			
9	195	17	Surface	Chromium	8.22E+01			2.02E-06		2.02E-06	13%
9	195	17	Surface	Mercury	4.17E-01					0.00E+00	0%
9	195	17	Surface	Nickel	5.93E+01			4.50E-09		4.50E-09	0%
9	195	17	Surface	PCB, Total	7.40E-01	1.84E-06	2.52E-06	2.08E-07		4.56E-06	29%
9	195	17	Surface	Silver	1.01E+01					0.00E+00	0%
9	195	17	Surface	Thallium	5.40E-01					0.00E+00	0%
9	195	17	Surface	Total PAH	3.16E-01	2.86E-06	3.64E-06	6.04E-09		6.51E-06	42%
9	195	17	Surface	Uranium-235	1.32E-01	4.78E-08		1.99E-10	2.42E-07	2.90E-07	2%
9	195	17	Surface	Uranium-238	2.48E+00	1.16E-06		3.46E-09	9.55E-07	2.11E-06	14%
9	**195**	**17**	**Surface**	**Totals**		**5.90E-06**	**6.16E-06**	**2.24E-06**	**1.20E-06**	**1.55E-05**	
9	**195**	**17**	**Surface**	**Percent**		**38%**	**40%**	**14%**	**8%**		
9	486	1	Surface	Cesium-137	1.71E+00	1.64E-07		3.04E-12	1.47E-05	1.48E-05	100%
9	**486**	**1**	**Surface**	**Totals**		**1.64E-07**		**3.04E-12**	**1.47E-05**	**1.48E-05**	
9	**486**	**1**	**Surface**	**Percent**		**1%**		**0%**	**99%**		
9	487	1	Surface	Cesium-137	1.38E+00	1.33E-07		2.45E-12	1.18E-05	1.20E-05	100%
9	**487**	**1**	**Surface**	**Totals**		**1.33E-07**		**2.45E-12**	**1.18E-05**	**1.20E-05**	
9	**487**	**1**	**Surface**	**Percent**		**1%**		**0%**	**99%**		
9	492	1	Surface	Arsenic	1.47E+01	2.74E-05	8.04E-06	1.85E-08		3.54E-05	5%
9	492	1	Surface	Beryllium	1.04E+01			7.29E-09		7.29E-09	0%
9	492	1	Surface	Cadmium	3.14E+00			1.65E-09		1.65E-09	0%
9	492	1	Surface	Chromium	1.04E+03			2.55E-05		2.55E-05	4%
9	492	1	Surface	Cobalt-60	9.63E-03	8.62E-10		5.14E-14	4.03E-07	4.04E-07	0%
9	492	1	Surface	Neptunium-237	2.09E-01	7.52E-08		5.52E-10	5.62E-07	6.38E-07	0%
9	492	1	Surface	PCB, Total	4.41E+01	1.09E-04	1.50E-04	1.24E-05		2.72E-04	39%
9	492	1	Surface	Uranium	1.77E+03					0.00E+00	0%
9	492	1	Surface	Uranium-234	5.39E+01	1.89E-05		9.17E-08	4.59E-08	1.90E-05	3%
9	492	1	Surface	Uranium-235	5.72E+00	2.07E-06		8.62E-09	1.05E-05	1.26E-05	2%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	492	1	Surface	Uranium-238	3.83E+02	1.79E-04		5.34E-07	1.48E-04	3.27E-04	47%
9	492	1	Surface	Vanadium	4.32E+01					0.00E+00	0%
9	**492**	**1**	**Surface**	**Totals**		**3.36E-04**	**1.58E-04**	**3.86E-05**	**1.59E-04**	**6.92E-04**	
9	**492**	**1**	**Surface**	**Percent**		**49%**	**23%**	**6%**	**23%**		
9	493	1	Surface	Aluminum	1.44E+04					0.00E+00	0%
9	493	1	Surface	Barium	4.04E+02					0.00E+00	0%
9	493	1	Surface	Beryllium	9.91E-01			6.94E-10		6.94E-10	0%
9	493	1	Surface	Chromium	6.61E+01			1.62E-06		1.62E-06	8%
9	493	1	Surface	Cobalt	3.79E+01			9.96E-08		9.96E-08	1%
9	493	1	Surface	Cobalt-60	1.36E-02	1.22E-09		7.26E-14	5.70E-07	5.71E-07	3%
9	493	1	Surface	Manganese	3.55E+03					0.00E+00	0%
9	493	1	Surface	Mercury	2.60E-01					0.00E+00	0%
9	493	1	Surface	Neptunium-237	1.22E-01	4.39E-08		3.22E-10	3.28E-07	3.72E-07	2%
9	493	1	Surface	Nickel	2.13E+02			1.62E-08		1.62E-08	0%
9	493	1	Surface	PCB, Total	2.60E-01	6.45E-07	8.85E-07	7.31E-08		1.60E-06	8%
9	493	1	Surface	Total PAH	5.00E-01	4.53E-06	5.77E-06	9.56E-09		1.03E-05	52%
9	493	1	Surface	Uranium-235	1.65E-01	5.97E-08		2.49E-10	3.03E-07	3.63E-07	2%
9	493	1	Surface	Uranium-238	5.50E+00	2.56E-06		7.67E-09	2.12E-06	4.69E-06	24%
9	493	1	Surface	Vanadium	4.05E+01					0.00E+00	0%
9	**493**	**1**	**Surface**	**Totals**		**7.84E-06**	**6.65E-06**	**1.83E-06**	**3.32E-06**	**1.96E-05**	
9	**493**	**1**	**Surface**	**Percent**		**40%**	**34%**	**9%**	**17%**		
9	517	1	Surface	Beryllium	7.39E-01			5.18E-10		5.18E-10	0%
9	517	1	Surface	Chromium	4.91E+01			1.20E-06		1.20E-06	10%
9	517	1	Surface	Cobalt-60	6.39E-03	5.72E-10		3.41E-14	2.68E-07	2.68E-07	2%
9	517	1	Surface	Neptunium-237	1.07E+00	3.85E-07		2.83E-09	2.88E-06	3.27E-06	28%
9	517	1	Surface	Nickel	1.72E+02			1.31E-08		1.31E-08	0%
9	517	1	Surface	PCB, Total	5.00E-01	1.24E-06	1.70E-06	1.41E-07		3.08E-06	27%
9	517	1	Surface	Uranium-235	1.60E-01	5.79E-08		2.41E-10	2.94E-07	3.52E-07	3%
9	517	1	Surface	Uranium-238	3.89E+00	1.81E-06		5.43E-09	1.50E-06	3.32E-06	29%
9	**517**	**1**	**Surface**	**Totals**		**3.50E-06**	**1.70E-06**	**1.37E-06**	**4.94E-06**	**1.15E-05**	
9	**517**	**1**	**Surface**	**Percent**		**30%**	**15%**	**12%**	**43%**		
9	541	1	Surface	Aluminum	1.43E+04					0.00E+00	0%
9	541	1	Surface	Americium-241	7.53E+00	3.63E-06		3.16E-08	7.02E-07	4.36E-06	0%
9	541	1	Surface	Barium	1.28E+02					0.00E+00	0%
9	541	1	Surface	Beryllium	6.98E-01			4.89E-10		4.89E-10	0%
9	541	1	Surface	Cadmium	1.68E+00			8.84E-10		8.84E-10	0%
9	541	1	Surface	Cesium-137	9.58E-01	9.21E-08		1.70E-12	8.22E-06	8.31E-06	1%
9	541	1	Surface	Chromium	8.24E+02			2.02E-05		2.02E-05	1%
9	541	1	Surface	Cobalt-60	1.01E-02	9.04E-10		5.39E-14	4.23E-07	4.24E-07	0%
9	541	1	Surface	Iron	1.60E+04					0.00E+00	0%
9	541	1	Surface	Mercury	9.81E-02					0.00E+00	0%
9	541	1	Surface	Naphthalene	6.55E-01			2.17E-07		2.17E-07	0%
9	541	1	Surface	Neptunium-237	5.52E-02	1.99E-08		1.46E-10	1.48E-07	1.68E-07	0%
9	541	1	Surface	Nickel	1.52E+01			1.16E-09		1.16E-09	0%
9	541	1	Surface	PCB, Total	6.06E+01	1.50E-04	2.06E-04	1.70E-05		3.74E-04	27%
9	541	1	Surface	Total PAH	2.33E+00	2.11E-05	2.69E-05	4.45E-08		4.80E-05	3%
9	541	1	Surface	Uranium	6.38E+03					0.00E+00	0%
9	541	1	Surface	Uranium-234	1.43E+02	5.01E-05		2.43E-07	1.22E-07	5.05E-05	4%
9	541	1	Surface	Uranium-235	1.76E+01	6.35E-06		2.65E-08	3.22E-05	3.86E-05	3%
9	541	1	Surface	Uranium-238	1.00E+03	4.67E-04		1.40E-06	3.86E-04	8.54E-04	61%
9	541	1	Surface	Vanadium	3.04E+01					0.00E+00	0%
9	**541**	**1**	**Surface**	**Totals**		**6.98E-04**	**2.33E-04**	**3.92E-05**	**4.27E-04**	**1.40E-03**	
9	**541**	**1**	**Surface**	**Percent**		**50%**	**17%**	**3%**	**31%**		
9	561	1	Surface	Antimony	9.36E-01					0.00E+00	0%
9	561	1	Surface	Arsenic	1.66E+01	3.08E-05	9.05E-06	2.08E-08		3.99E-05	26%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	561	1	Surface	Barium	1.40E+02					0.00E+00	0%
9	561	1	Surface	Beryllium	6.85E-01			4.80E-10		4.80E-10	0%
9	561	1	Surface	Chromium	8.58E+01			2.10E-06		2.10E-06	1%
9	561	1	Surface	Cobalt	1.07E+01			2.81E-08		2.81E-08	0%
9	561	1	Surface	Cobalt-60	7.06E-02	6.32E-09		3.77E-13	2.96E-06	2.96E-06	2%
9	561	1	Surface	Iron	2.05E+04					0.00E+00	0%
9	561	1	Surface	Manganese	1.61E+03					0.00E+00	0%
9	561	1	Surface	Neptunium-237	2.71E-02	9.75E-09		7.16E-11	7.29E-08	8.27E-08	0%
9	561	1	Surface	PCB, Total	1.04E+00	2.59E-06	3.55E-06	2.93E-07		6.43E-06	4%
9	561	1	Surface	Thallium	3.33E-01					0.00E+00	0%
9	561	1	Surface	Total PAH	3.94E-01	3.57E-06	4.54E-06	7.53E-09		8.12E-06	5%
9	561	1	Surface	Uranium	2.65E+02					0.00E+00	0%
9	561	1	Surface	Uranium-234	7.84E+00	2.75E-06		1.33E-08	6.67E-09	2.77E-06	2%
9	561	1	Surface	Uranium-235	1.37E+00	4.94E-07		2.06E-09	2.51E-06	3.00E-06	2%
9	561	1	Surface	Uranium-238	1.07E+02	4.97E-05		1.49E-07	4.10E-05	9.08E-05	58%
9	561	1	Surface	Vanadium	3.76E+01					0.00E+00	0%
9	**561**	**1**	**Surface**	**Totals**		**8.99E-05**	**1.71E-05**	**2.62E-06**	**4.66E-05**	**1.56E-04**	
9	**561**	**1**	**Surface**	**Percent**		**58%**	**11%**	**2%**	**30%**		
9	561	2	Surface	Antimony	5.33E+00					0.00E+00	0%
9	561	2	Surface	Arsenic	1.30E+01	2.42E-05	7.12E-06	1.64E-08		3.14E-05	6%
9	561	2	Surface	Beryllium	6.34E-01			4.44E-10		4.44E-10	0%
9	561	2	Surface	Cadmium	4.13E-01			2.17E-10		2.17E-10	0%
9	561	2	Surface	Cesium-137	4.09E-01	3.93E-08		7.26E-13	3.51E-06	3.55E-06	1%
9	561	2	Surface	Chromium	2.88E+02			7.07E-06		7.07E-06	1%
9	561	2	Surface	Cobalt	1.14E+01			3.00E-08		3.00E-08	0%
9	561	2	Surface	Cobalt-60	2.76E-02	2.47E-09		1.47E-13	1.16E-06	1.16E-06	0%
9	561	2	Surface	Manganese	1.12E+03					0.00E+00	0%
9	561	2	Surface	Neptunium-237	4.71E-02	1.69E-08		1.24E-10	1.27E-07	1.44E-07	0%
9	561	2	Surface	PCB, Total	1.64E+01	4.08E-05	5.59E-05	4.62E-06		1.01E-04	18%
9	561	2	Surface	Thallium	4.09E-01					0.00E+00	0%
9	561	2	Surface	Total PAH	2.43E+00	2.20E-05	2.80E-05	4.65E-08		5.01E-05	9%
9	561	2	Surface	Uranium	1.38E+03					0.00E+00	0%
9	561	2	Surface	Uranium-234	4.06E+01	1.43E-05		6.91E-08	3.46E-08	1.44E-05	3%
9	561	2	Surface	Uranium-235	7.09E+00	2.57E-06		1.07E-08	1.30E-05	1.56E-05	3%
9	561	2	Surface	Uranium-238	4.00E+02	1.87E-04		5.58E-07	1.54E-04	3.41E-04	60%
9	561	2	Surface	Vanadium	3.46E+01					0.00E+00	0%
9	**561**	**2**	**Surface**	**Totals**		**2.91E-04**	**9.10E-05**	**1.24E-05**	**1.72E-04**	**5.66E-04**	
9	**561**	**2**	**Surface**	**Percent**		**51%**	**16%**	**2%**	**30%**		
9	562	1	Surface	Uranium	8.73E+01					0.00E+00	0%
9	562	1	Surface	Uranium-238	2.73E+00	1.27E-06		3.81E-09	1.05E-06	2.33E-06	100%
9	**562**	**1**	**Surface**	**Totals**		**1.27E-06**		**3.81E-09**	**1.05E-06**	**2.33E-06**	
9	**562**	**1**	**Surface**	**Percent**		**55%**		**0%**	**45%**		
9	562	2	Surface	PCB, Total	1.58E+00	3.92E-06	5.38E-06	4.44E-07		9.74E-06	2%
9	562	2	Surface	Uranium-234	5.34E+01	1.87E-05		9.08E-08	4.55E-08	1.89E-05	3%
9	562	2	Surface	Uranium-235	8.96E+00	3.24E-06		1.35E-08	1.64E-05	1.97E-05	4%
9	562	2	Surface	Uranium-238	5.81E+02	2.71E-04		8.10E-07	2.24E-04	4.95E-04	91%
9	**562**	**2**	**Surface**	**Totals**		**2.97E-04**	**5.38E-06**	**1.36E-06**	**2.40E-04**	**5.44E-04**	
9	**562**	**2**	**Surface**	**Percent**		**55%**	**1%**	**0%**	**44%**		
9	562	3	Surface	Chromium	3.82E+01			9.36E-07		9.36E-07	6%
9	562	3	Surface	PCB, Total	2.40E-01	5.96E-07	8.17E-07	6.75E-08		1.48E-06	9%
9	562	3	Surface	Total PAH	2.20E-01	1.99E-06	2.54E-06	4.21E-09		4.54E-06	27%
9	562	3	Surface	Uranium	5.89E+01					0.00E+00	0%
9	562	3	Surface	Uranium-235	1.63E-01	5.90E-08		2.46E-10	2.99E-07	3.58E-07	2%
9	562	3	Surface	Uranium-238	1.09E+01	5.08E-06		1.52E-08	4.20E-06	9.30E-06	56%
9	**562**	**3**	**Surface**	**Totals**		**7.73E-06**	**3.35E-06**	**1.02E-06**	**4.50E-06**	**1.66E-05**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**562**	**3**	**Surface**	**Percent**		**47%**	**20%**	**6%**	**27%**		
9	562	4	Surface	Chromium	4.67E+01			1.14E-06		1.14E-06	37%
9	562	4	Surface	Uranium	2.10E+01					0.00E+00	0%
9	562	4	Surface	Uranium-238	2.24E+00	1.04E-06		3.12E-09	8.63E-07	1.91E-06	63%
9	**562**	**4**	**Surface**	**Totals**		**1.04E-06**		**1.15E-06**	**8.63E-07**	**3.05E-06**	
9	**562**	**4**	**Surface**	**Percent**		**34%**		**38%**	**28%**		
9	562	5	Surface	Chromium	1.53E+02			3.76E-06		3.76E-06	5%
9	562	5	Surface	PCB, Total	9.50E-01	2.36E-06	3.23E-06	2.67E-07		5.86E-06	8%
9	562	5	Surface	Total PAH	7.05E-02	6.39E-07	8.13E-07	1.35E-09		1.45E-06	2%
9	562	5	Surface	Uranium	2.08E+02					0.00E+00	0%
9	562	5	Surface	Uranium-234	8.57E+00	3.01E-06		1.46E-08	7.30E-09	3.03E-06	4%
9	562	5	Surface	Uranium-235	9.50E-01	3.44E-07		1.43E-09	1.74E-06	2.09E-06	3%
9	562	5	Surface	Uranium-238	6.24E+01	2.91E-05		8.70E-08	2.40E-05	5.32E-05	77%
9	**562**	**5**	**Surface**	**Totals**		**3.54E-05**	**4.05E-06**	**4.13E-06**	**2.58E-05**	**6.94E-05**	
9	**562**	**5**	**Surface**	**Percent**		**51%**	**6%**	**6%**	**37%**		
9	562	6	Surface	Uranium-234	4.01E+01	1.41E-05		6.82E-08	3.41E-08	1.42E-05	4%
9	562	6	Surface	Uranium-235	6.81E+00	2.46E-06		1.03E-08	1.25E-05	1.50E-05	4%
9	562	6	Surface	Uranium-238	3.62E+02	1.69E-04		5.04E-07	1.39E-04	3.08E-04	91%
9	**562**	**6**	**Surface**	**Totals**		**1.85E-04**		**5.83E-07**	**1.52E-04**	**3.38E-04**	
9	**562**	**6**	**Surface**	**Percent**		**55%**		**0%**	**45%**		
9	563	1	Surface	Cadmium	8.96E-01			4.71E-10		4.71E-10	0%
9	563	1	Surface	Chromium	2.85E+02			6.99E-06		6.99E-06	50%
9	563	1	Surface	PCB, Total	7.40E-01	1.84E-06	2.52E-06	2.08E-07		4.56E-06	33%
9	563	1	Surface	Uranium	1.51E+01					0.00E+00	0%
9	563	1	Surface	Uranium-238	2.76E+00	1.29E-06		3.85E-09	1.06E-06	2.35E-06	17%
9	**563**	**1**	**Surface**	**Totals**		**3.12E-06**	**2.52E-06**	**7.20E-06**	**1.06E-06**	**1.39E-05**	
9	**563**	**1**	**Surface**	**Percent**		**22%**	**18%**	**52%**	**8%**		
9	563	2	Surface	Cesium-137	6.47E-01	6.22E-08		1.15E-12	5.55E-06	5.62E-06	82%
9	563	2	Surface	Uranium-238	1.49E+00	6.95E-07		2.08E-09	5.74E-07	1.27E-06	18%
9	**563**	**2**	**Surface**	**Totals**		**7.57E-07**		**2.08E-09**	**6.13E-06**	**6.89E-06**	
9	**563**	**2**	**Surface**	**Percent**		**11%**		**0%**	**89%**		
9	564	1	Surface	Arsenic	4.30E+01	8.01E-05	2.35E-05	5.42E-08		1.04E-04	77%
9	564	1	Surface	Beryllium	2.12E+00			1.49E-09		1.49E-09	0%
9	564	1	Surface	Cadmium	1.96E+00			1.03E-09		1.03E-09	0%
9	564	1	Surface	Cesium-137	6.20E-01	5.96E-08		1.10E-12	5.32E-06	5.38E-06	4%
9	564	1	Surface	Chromium	7.49E+01			1.84E-06		1.84E-06	1%
9	564	1	Surface	Iron	3.66E+04					0.00E+00	0%
9	564	1	Surface	Mercury	2.30E-01					0.00E+00	0%
9	564	1	Surface	Nickel	2.24E+01			1.70E-09		1.70E-09	0%
9	564	1	Surface	PCB, Total	1.93E+00	4.79E-06	6.57E-06	5.43E-07		1.19E-05	9%
9	564	1	Surface	Thallium	2.36E+00					0.00E+00	0%
9	564	1	Surface	Thorium-230	5.01E+00	2.25E-06		2.13E-08	1.39E-08	2.28E-06	2%
9	564	1	Surface	Uranium	5.83E+01					0.00E+00	0%
9	564	1	Surface	Uranium-234	6.93E+00	2.43E-06		1.18E-08	5.90E-09	2.45E-06	2%
9	564	1	Surface	Uranium-235	3.87E-01	1.40E-07		5.83E-10	7.10E-07	8.51E-07	1%
9	564	1	Surface	Uranium-238	8.33E+00	3.88E-06		1.16E-08	3.21E-06	7.10E-06	5%
9	564	1	Surface	Vanadium	8.06E+01					0.00E+00	0%
9	**564**	**1**	**Surface**	**Totals**		**9.36E-05**	**3.01E-05**	**2.48E-06**	**9.26E-06**	**1.35E-04**	
9	**564**	**1**	**Surface**	**Percent**		**69%**	**22%**	**2%**	**7%**		
9	567	3	Surface	Chromium	3.79E+01			9.29E-07		9.29E-07	100%
9	**567**	**3**	**Surface**	**Totals**				**9.29E-07**		**9.29E-07**	
9	**567**	**3**	**Surface**	**Percent**				**100%**			
9	567	4	Surface	Aluminum	1.25E+04					0.00E+00	0%
9	567	4	Surface	Chromium	1.63E+01			4.00E-07		4.00E-07	31%
9	567	4	Surface	Uranium-238	1.05E+00	4.89E-07		1.46E-09	4.04E-07	8.95E-07	69%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**567**	**4**	**Surface**	**Totals**		**4.89E-07**		**4.01E-07**	**4.04E-07**	**1.29E-06**	
9	**567**	**4**	**Surface**	**Percent**		**38%**		**31%**	**31%**		
10	14	1	Surface	Americium-241	1.27E+00	6.10E-07		5.31E-09	1.18E-07	7.34E-07	2%
10	14	1	Surface	Arsenic	1.10E+01	2.04E-05	6.01E-06	1.38E-08		2.65E-05	65%
10	14	1	Surface	Chromium	6.36E+01			1.56E-06		1.56E-06	4%
10	14	1	Surface	Iron	1.89E+04					0.00E+00	0%
10	14	1	Surface	Neptunium-237	2.14E-01	7.70E-08		5.65E-10	5.76E-07	6.53E-07	2%
10	14	1	Surface	Nickel	1.40E+02			1.06E-08		1.06E-08	0%
10	14	1	Surface	PCB, Total	5.00E-01	1.24E-06	1.70E-06	1.41E-07		3.08E-06	8%
10	14	1	Surface	Silver	1.67E+01					0.00E+00	0%
10	14	1	Surface	Technetium-99	4.06E+02	6.90E-06		8.54E-10	1.12E-07	7.02E-06	17%
10	14	1	Surface	Uranium	7.21E+01					0.00E+00	0%
10	14	1	Surface	Uranium-238	1.69E+00	7.88E-07		2.36E-09	6.51E-07	1.44E-06	4%
10	**14**	**1**	**Surface**	**Totals**		**3.01E-05**	**7.71E-06**	**1.73E-06**	**1.46E-06**	**4.10E-05**	
10	**14**	**1**	**Surface**	**Percent**		**73%**	**19%**	**4%**	**4%**		
10	14	2	Surface	Antimony	3.70E+00					0.00E+00	0%
10	14	2	Surface	Arsenic	1.45E+01	2.71E-05	7.95E-06	1.83E-08		3.50E-05	30%
10	14	2	Surface	Beryllium	7.10E-01			4.98E-10		4.98E-10	0%
10	14	2	Surface	Chromium	6.65E+01			1.63E-06		1.63E-06	1%
10	14	2	Surface	Copper	1.76E+02					0.00E+00	0%
10	14	2	Surface	Iron	3.72E+04					0.00E+00	0%
10	14	2	Surface	Manganese	1.44E+03					0.00E+00	0%
10	14	2	Surface	Mercury	2.67E-01					0.00E+00	0%
10	14	2	Surface	Neptunium-237	7.70E-01	2.77E-07		2.03E-09	2.07E-06	2.35E-06	2%
10	14	2	Surface	Nickel	6.78E+02			5.15E-08		5.15E-08	0%
10	14	2	Surface	PCB, Total	3.90E-01	9.68E-07	1.33E-06	1.10E-07		2.41E-06	2%
10	14	2	Surface	Thorium-230	5.98E+00	2.68E-06		2.54E-08	1.65E-08	2.72E-06	2%
10	14	2	Surface	Total PAH	3.38E-01	3.06E-06	3.90E-06	6.47E-09		6.97E-06	6%
10	14	2	Surface	Uranium	2.93E+02					0.00E+00	0%
10	14	2	Surface	Uranium-234	3.24E+01	1.14E-05		5.51E-08	2.76E-08	1.14E-05	10%
10	14	2	Surface	Uranium-235	2.00E+00	7.24E-07		3.01E-09	3.67E-06	4.40E-06	4%
10	14	2	Surface	Uranium-238	5.61E+01	2.62E-05		7.83E-08	2.16E-05	4.78E-05	42%
10	**14**	**2**	**Surface**	**Totals**		**7.23E-05**	**1.32E-05**	**1.98E-06**	**2.74E-05**	**1.15E-04**	
10	**14**	**2**	**Surface**	**Percent**		**63%**	**11%**	**2%**	**24%**		
10	14	3	Surface	Arsenic	1.30E+01	2.41E-05	7.09E-06	1.63E-08		3.13E-05	36%
10	14	3	Surface	Chromium	7.01E+01			1.72E-06		1.72E-06	2%
10	14	3	Surface	Copper	1.29E+02					0.00E+00	0%
10	14	3	Surface	Iron	3.48E+04					0.00E+00	0%
10	14	3	Surface	Manganese	1.06E+03					0.00E+00	0%
10	14	3	Surface	Mercury	7.48E+00					0.00E+00	0%
10	14	3	Surface	Molybdenum	2.21E+01					0.00E+00	0%
10	14	3	Surface	Nickel	5.76E+02			4.38E-08		4.38E-08	0%
10	14	3	Surface	PCB, Total	8.65E+00	2.15E-05	2.94E-05	2.43E-06		5.33E-05	61%
10	14	3	Surface	Uranium	2.18E+02					0.00E+00	0%
10	14	3	Surface	Uranium-238	1.50E+00	6.99E-07		2.09E-09	5.78E-07	1.28E-06	1%
10	**14**	**3**	**Surface**	**Totals**		**4.63E-05**	**3.65E-05**	**4.21E-06**	**5.78E-07**	**8.76E-05**	
10	**14**	**3**	**Surface**	**Percent**		**53%**	**42%**	**5%**	**1%**		
10	14	4	Surface	Antimony	4.30E+00					0.00E+00	0%
10	14	4	Surface	Arsenic	1.33E+01	2.47E-05	7.26E-06	1.67E-08		3.20E-05	11%
10	14	4	Surface	Chromium	7.20E+01			1.77E-06		1.77E-06	1%
10	14	4	Surface	Copper	3.54E+02					0.00E+00	0%
10	14	4	Surface	Iron	3.88E+04					0.00E+00	0%
10	14	4	Surface	Mercury	4.87E-01					0.00E+00	0%
10	14	4	Surface	Neptunium-237	2.68E+00	9.64E-07		7.08E-09	7.21E-06	8.18E-06	3%
10	14	4	Surface	Nickel	7.31E+02			5.55E-08		5.55E-08	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	4	Surface	PCB, Total	6.61E+00	1.64E-05	2.25E-05	1.86E-06		4.07E-05	14%
10	14	4	Surface	Silver	1.17E+01					0.00E+00	0%
10	14	4	Surface	Thorium-230	8.33E+00	3.74E-06		3.54E-08	2.31E-08	3.79E-06	1%
10	14	4	Surface	Total PAH	2.51E-01	2.27E-06	2.89E-06	4.79E-09		5.17E-06	2%
10	14	4	Surface	Uranium	3.72E+02					0.00E+00	0%
10	14	4	Surface	Uranium-234	1.13E+02	3.96E-05		1.92E-07	9.62E-08	3.99E-05	14%
10	14	4	Surface	Uranium-235	8.00E+00	2.89E-06		1.21E-08	1.47E-05	1.76E-05	6%
10	14	4	Surface	Uranium-238	1.69E+02	7.88E-05		2.36E-07	6.51E-05	1.44E-04	49%
10	**14**	**4**	**Surface**	**Totals**		**1.69E-04**	**3.26E-05**	**4.18E-06**	**8.71E-05**	**2.93E-04**	
10	**14**	**4**	**Surface**	**Percent**		**58%**	**11%**	**1%**	**30%**		
10	14	5	Surface	Antimony	2.30E+00					0.00E+00	0%
10	14	5	Surface	Arsenic	1.31E+01	2.44E-05	7.15E-06	1.65E-08		3.15E-05	20%
10	14	5	Surface	Cadmium	3.90E+00			2.05E-09		2.05E-09	0%
10	14	5	Surface	Chromium	4.70E+01			1.15E-06		1.15E-06	1%
10	14	5	Surface	Cobalt	1.40E+01			3.68E-08		3.68E-08	0%
10	14	5	Surface	Copper	1.34E+02					0.00E+00	0%
10	14	5	Surface	Iron	3.92E+04					0.00E+00	0%
10	14	5	Surface	Manganese	8.28E+02					0.00E+00	0%
10	14	5	Surface	Mercury	1.09E+01					0.00E+00	0%
10	14	5	Surface	Neptunium-237	1.74E+00	6.26E-07		4.59E-09	4.68E-06	5.31E-06	3%
10	14	5	Surface	Nickel	4.61E+02			3.50E-08		3.50E-08	0%
10	14	5	Surface	PCB, Total	1.00E+00	2.48E-06	3.40E-06	2.81E-07		6.17E-06	4%
10	14	5	Surface	Silver	1.29E+01					0.00E+00	0%
10	14	5	Surface	Technetium-99	1.01E+02	1.72E-06		2.12E-10	2.78E-08	1.75E-06	1%
10	14	5	Surface	Thallium	4.10E-01					0.00E+00	0%
10	14	5	Surface	Thorium-230	1.39E+01	6.23E-06		5.91E-08	3.85E-08	6.33E-06	4%
10	14	5	Surface	Total PAH	1.21E-01	1.10E-06	1.40E-06	2.31E-09		2.49E-06	2%
10	14	5	Surface	Uranium	2.62E+02					0.00E+00	0%
10	14	5	Surface	Uranium-234	5.22E+01	1.83E-05		8.88E-08	4.44E-08	1.84E-05	11%
10	14	5	Surface	Uranium-235	3.33E+00	1.20E-06		5.02E-09	6.11E-06	7.32E-06	5%
10	14	5	Surface	Uranium-238	9.42E+01	4.39E-05		1.31E-07	3.63E-05	8.03E-05	50%
10	**14**	**5**	**Surface**	**Totals**		**9.99E-05**	**1.20E-05**	**1.81E-06**	**4.72E-05**	**1.61E-04**	
10	**14**	**5**	**Surface**	**Percent**		**62%**	**7%**	**1%**	**29%**		
10	14	6	Surface	Antimony	2.70E+00					0.00E+00	0%
10	14	6	Surface	Cadmium	8.40E-01			4.41E-10		4.41E-10	0%
10	14	6	Surface	Chromium	4.46E+02			1.09E-05		1.09E-05	10%
10	14	6	Surface	Copper	1.22E+02					0.00E+00	0%
10	14	6	Surface	Mercury	3.47E-01					0.00E+00	0%
10	14	6	Surface	Neptunium-237	2.65E+00	9.53E-07		7.00E-09	7.13E-06	8.09E-06	7%
10	14	6	Surface	Nickel	9.63E+02			7.31E-08		7.31E-08	0%
10	14	6	Surface	PCB, Total	5.00E+00	1.24E-05	1.70E-05	1.41E-06		3.08E-05	28%
10	14	6	Surface	Silver	1.19E+01					0.00E+00	0%
10	14	6	Surface	Uranium	5.79E+02					0.00E+00	0%
10	14	6	Surface	Uranium-234	3.41E+01	1.20E-05		5.80E-08	2.90E-08	1.20E-05	11%
10	14	6	Surface	Uranium-235	2.27E+00	8.21E-07		3.42E-09	4.16E-06	4.99E-06	5%
10	14	6	Surface	Uranium-238	5.08E+01	2.37E-05		7.09E-08	1.96E-05	4.33E-05	39%
10	**14**	**6**	**Surface**	**Totals**		**4.98E-05**	**1.70E-05**	**1.26E-05**	**3.09E-05**	**1.10E-04**	
10	**14**	**6**	**Surface**	**Percent**		**45%**	**15%**	**11%**	**28%**		
10	14	7	Surface	Antimony	7.50E-01					0.00E+00	0%
10	14	7	Surface	Arsenic	1.13E+01	2.10E-05	6.18E-06	1.42E-08		2.72E-05	26%
10	14	7	Surface	Cadmium	2.70E+00			1.42E-09		1.42E-09	0%
10	14	7	Surface	Chromium	6.46E+01			1.58E-06		1.58E-06	1%
10	14	7	Surface	Mercury	7.82E+00					0.00E+00	0%
10	14	7	Surface	Neptunium-237	1.49E+00	5.36E-07		3.93E-09	4.01E-06	4.55E-06	4%
10	14	7	Surface	Nickel	1.22E+03			9.28E-08		9.28E-08	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	7	Surface	PCB, Total	7.60E+00	1.89E-05	2.59E-05	2.14E-06		4.69E-05	44%
10	14	7	Surface	Total PAH	6.31E-02	5.72E-07	7.28E-07	1.21E-09		1.30E-06	1%
10	14	7	Surface	Uranium	3.33E+02					0.00E+00	0%
10	14	7	Surface	Uranium-234	1.28E+01	4.49E-06		2.18E-08	1.09E-08	4.52E-06	4%
10	14	7	Surface	Uranium-235	9.60E-01	3.47E-07		1.45E-09	1.76E-06	2.11E-06	2%
10	14	7	Surface	Uranium-238	2.13E+01	9.93E-06		2.97E-08	8.20E-06	1.82E-05	17%
10	**14**	**7**	**Surface**	**Totals**		**5.58E-05**	**3.28E-05**	**3.89E-06**	**1.40E-05**	**1.06E-04**	
10	**14**	**7**	**Surface**	**Percent**		**52%**	**31%**	**4%**	**13%**		
10	14	8	Surface	Antimony	6.10E-01					0.00E+00	0%
10	14	8	Surface	Arsenic	1.14E+01	2.12E-05	6.22E-06	1.43E-08		2.74E-05	40%
10	14	8	Surface	Chromium	4.60E+01			1.13E-06		1.13E-06	2%
10	14	8	Surface	Mercury	7.90E+00					0.00E+00	0%
10	14	8	Surface	Neptunium-237	8.80E-01	3.16E-07		2.32E-09	2.37E-06	2.69E-06	4%
10	14	8	Surface	Nickel	6.73E+02			5.10E-08		5.10E-08	0%
10	14	8	Surface	PCB, Total	5.00E+00	1.24E-05	1.70E-05	1.41E-06		3.08E-05	45%
10	14	8	Surface	Silver	9.63E+00					0.00E+00	0%
10	14	8	Surface	Total PAH	6.28E-02	5.69E-07	7.24E-07	1.20E-09		1.29E-06	2%
10	14	8	Surface	Uranium	3.35E+02					0.00E+00	0%
10	14	8	Surface	Uranium-235	2.38E-01	8.61E-08		3.59E-10	4.37E-07	5.23E-07	1%
10	14	8	Surface	Uranium-238	5.92E+00	2.76E-06		8.26E-09	2.28E-06	5.05E-06	7%
10	**14**	**8**	**Surface**	**Totals**		**3.73E-05**	**2.40E-05**	**2.61E-06**	**5.08E-06**	**6.90E-05**	
10	**14**	**8**	**Surface**	**Percent**		**54%**	**35%**	**4%**	**7%**		
10	14	9	Surface	Antimony	2.00E+00					0.00E+00	0%
10	14	9	Surface	Arsenic	1.40E+01	2.61E-05	7.68E-06	1.77E-08		3.38E-05	2%
10	14	9	Surface	Cadmium	9.40E-01			4.94E-10		4.94E-10	0%
10	14	9	Surface	Cesium-137	4.53E-01	4.35E-08		8.04E-13	3.89E-06	3.93E-06	0%
10	14	9	Surface	Chromium	4.64E+01			1.14E-06		1.14E-06	0%
10	14	9	Surface	Mercury	1.13E+00					0.00E+00	0%
10	14	9	Surface	Neptunium-237	1.09E+01	3.93E-06		2.89E-08	2.94E-05	3.34E-05	2%
10	14	9	Surface	Nickel	9.43E+02			7.16E-08		7.16E-08	0%
10	14	9	Surface	PCB, Total	6.84E+00	1.70E-05	2.33E-05	1.92E-06		4.22E-05	3%
10	14	9	Surface	Technetium-99	1.96E+02	3.33E-06		4.12E-10	5.39E-08	3.39E-06	0%
10	14	9	Surface	Total PAH	4.87E-01	4.42E-06	5.62E-06	9.32E-09		1.00E-05	1%
10	14	9	Surface	Uranium	1.46E+03					0.00E+00	0%
10	14	9	Surface	Uranium-234	8.32E+02	2.92E-04		1.42E-06	7.09E-07	2.94E-04	19%
10	14	9	Surface	Uranium-235	5.46E+01	1.97E-05		8.22E-08	1.00E-04	1.20E-04	8%
10	14	9	Surface	Uranium-238	1.20E+03	5.59E-04		1.67E-06	4.62E-04	1.02E-03	65%
10	**14**	**9**	**Surface**	**Totals**		**9.26E-04**	**3.66E-05**	**6.36E-06**	**5.96E-04**	**1.57E-03**	
10	**14**	**9**	**Surface**	**Percent**		**59%**	**2%**	**0%**	**38%**		
10	14	10	Surface	Antimony	9.40E-01					0.00E+00	0%
10	14	10	Surface	Arsenic	1.12E+01	2.09E-05	6.15E-06	1.42E-08		2.71E-05	18%
10	14	10	Surface	Chromium	4.19E+01			1.03E-06		1.03E-06	1%
10	14	10	Surface	Copper	1.41E+02					0.00E+00	0%
10	14	10	Surface	Iron	2.75E+04					0.00E+00	0%
10	14	10	Surface	Mercury	2.51E+01					0.00E+00	0%
10	14	10	Surface	Neptunium-237	2.64E+00	9.49E-07		6.97E-09	7.10E-06	8.06E-06	5%
10	14	10	Surface	Nickel	6.00E+02			4.56E-08		4.56E-08	0%
10	14	10	Surface	PCB, Total	9.38E+00	2.33E-05	3.19E-05	2.64E-06		5.79E-05	39%
10	14	10	Surface	Total PAH	2.72E-01	2.46E-06	3.13E-06	5.19E-09		5.60E-06	4%
10	14	10	Surface	Uranium	2.88E+02					0.00E+00	0%
10	14	10	Surface	Uranium-234	2.42E+01	8.49E-06		4.12E-08	2.06E-08	8.55E-06	6%
10	14	10	Surface	Uranium-235	1.76E+00	6.37E-07		2.65E-09	3.23E-06	3.87E-06	3%
10	14	10	Surface	Uranium-238	4.09E+01	1.91E-05		5.71E-08	1.58E-05	3.49E-05	24%
10	**14**	**10**	**Surface**	**Totals**		**7.58E-05**	**4.12E-05**	**3.84E-06**	**2.61E-05**	**1.47E-04**	
10	**14**	**10**	**Surface**	**Percent**		**52%**	**28%**	**3%**	**18%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	518	1	Surface	Carbazole	1.17E+01	2.91E-07	2.85E-07			5.76E-07	0%
10	518	1	Surface	Cobalt	6.80E+00			1.79E-08		1.79E-08	0%
10	518	1	Surface	Nickel	1.29E+01			9.76E-10		9.76E-10	0%
10	518	1	Surface	PCB, Total	6.30E-01	1.56E-06	2.14E-06	1.77E-07		3.89E-06	0%
10	518	1	Surface	Pyrene	3.94E+01					0.00E+00	0%
10	518	1	Surface	Total PAH	3.90E+01	3.53E-04	4.49E-04	7.45E-07		8.03E-04	99%
10	518	1	Surface	Uranium	2.17E+02					0.00E+00	0%
10	518	1	Surface	Uranium-235	6.74E-02	2.44E-08		1.02E-10	1.24E-07	1.48E-07	0%
10	518	1	Surface	Uranium-238	1.51E+00	7.06E-07		2.11E-09	5.83E-07	1.29E-06	0%
10	**518**	**1**	**Surface**	**Totals**		**3.56E-04**	**4.52E-04**	**9.43E-07**	**7.07E-07**	**8.09E-04**	
10	**518**	**1**	**Surface**	**Percent**		**44%**	**56%**	**0%**	**0%**		
10	520	1	Surface	Cesium-137	9.62E-01	9.25E-08		1.71E-12	8.26E-06	8.35E-06	41%
10	520	1	Surface	Chromium	3.17E+01			7.78E-07		7.78E-07	4%
10	520	1	Surface	Iron	1.56E+04					0.00E+00	0%
10	520	1	Surface	Mercury	1.07E+01					0.00E+00	0%
10	520	1	Surface	Neptunium-237	6.56E-01	2.36E-07		1.73E-09	1.76E-06	2.00E-06	10%
10	520	1	Surface	Nickel	2.60E+02			1.98E-08		1.98E-08	0%
10	520	1	Surface	Silver	1.30E+01					0.00E+00	0%
10	520	1	Surface	Thorium-230	1.13E+01	5.09E-06		4.82E-08	3.14E-08	5.16E-06	25%
10	520	1	Surface	Total PAH	3.18E-02	2.88E-07	3.67E-07	6.09E-10		6.56E-07	3%
10	520	1	Surface	Uranium	2.29E+01					0.00E+00	0%
10	520	1	Surface	Uranium-235	1.26E-01	4.56E-08		1.90E-10	2.31E-07	2.77E-07	1%
10	520	1	Surface	Uranium-238	3.93E+00	1.83E-06		5.48E-09	1.51E-06	3.35E-06	16%
10	**520**	**1**	**Surface**	**Totals**		**7.58E-06**	**3.67E-07**	**8.54E-07**	**1.18E-05**	**2.06E-05**	
10	**520**	**1**	**Surface**	**Percent**		**37%**	**2%**	**4%**	**57%**		
10	520	2	Surface	Beryllium	5.79E-01			4.06E-10		4.06E-10	0%
10	520	2	Surface	Chromium	6.67E+01			1.63E-06		1.63E-06	16%
10	520	2	Surface	Manganese	5.89E+02					0.00E+00	0%
10	520	2	Surface	Mercury	1.19E+01					0.00E+00	0%
10	520	2	Surface	Neptunium-237	7.48E-02	2.69E-08		1.98E-10	2.01E-07	2.28E-07	2%
10	520	2	Surface	Nickel	3.11E+02			2.36E-08		2.36E-08	0%
10	520	2	Surface	Total PAH	3.17E-01	2.87E-06	3.66E-06	6.06E-09		6.53E-06	66%
10	520	2	Surface	Uranium	3.96E+01					0.00E+00	0%
10	520	2	Surface	Uranium-238	1.78E+00	8.29E-07		2.48E-09	6.85E-07	1.52E-06	15%
10	**520**	**2**	**Surface**	**Totals**		**3.73E-06**	**3.66E-06**	**1.67E-06**	**8.86E-07**	**9.94E-06**	
10	**520**	**2**	**Surface**	**Percent**		**38%**	**37%**	**17%**	**9%**		
10	520	3	Surface	Chromium	3.97E+01			9.73E-07		9.73E-07	20%
10	520	3	Surface	Copper	1.19E+02					0.00E+00	0%
10	520	3	Surface	Nickel	2.65E+02			2.01E-08		2.01E-08	0%
10	520	3	Surface	Silver	1.27E+01					0.00E+00	0%
10	520	3	Surface	Total PAH	1.18E-01	1.07E-06	1.36E-06	2.26E-09		2.43E-06	51%
10	520	3	Surface	Uranium	1.92E+01					0.00E+00	0%
10	520	3	Surface	Uranium-238	1.57E+00	7.32E-07		2.19E-09	6.05E-07	1.34E-06	28%
10	**520**	**3**	**Surface**	**Totals**		**1.80E-06**	**1.36E-06**	**9.98E-07**	**6.05E-07**	**4.77E-06**	
10	**520**	**3**	**Surface**	**Percent**		**38%**	**29%**	**21%**	**13%**		
10	520	4	Surface	Chromium	3.82E+01			9.38E-07		9.38E-07	5%
10	520	4	Surface	Copper	1.11E+02					0.00E+00	0%
10	520	4	Surface	Mercury	9.69E+00					0.00E+00	0%
10	520	4	Surface	Neptunium-237	7.40E-01	2.66E-07		1.95E-09	1.99E-06	2.26E-06	11%
10	520	4	Surface	Nickel	2.82E+02			2.14E-08		2.14E-08	0%
10	520	4	Surface	Silver	1.04E+01					0.00E+00	0%
10	520	4	Surface	Total PAH	5.52E-01	5.01E-06	6.37E-06	1.06E-08		1.14E-05	56%
10	520	4	Surface	Uranium	2.40E+01					0.00E+00	0%
10	520	4	Surface	Uranium-235	2.42E-01	8.76E-08		3.65E-10	4.44E-07	5.32E-07	3%
10	520	4	Surface	Uranium-238	6.26E+00	2.92E-06		8.73E-09	2.41E-06	5.34E-06	26%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	**520**	**4**	**Surface**	**Totals**		**8.28E-06**	**6.37E-06**	**9.81E-07**	**4.85E-06**	**2.05E-05**	
10	**520**	**4**	**Surface**	**Percent**		**40%**	**31%**	**5%**	**24%**		
10	520	5	Surface	Antimony	9.60E-01					0.00E+00	0%
10	520	5	Surface	Chromium	3.68E+01			9.03E-07		9.03E-07	9%
10	520	5	Surface	Neptunium-237	1.55E-01	5.57E-08		4.09E-10	4.17E-07	4.73E-07	4%
10	520	5	Surface	Nickel	1.47E+02			1.12E-08		1.12E-08	0%
10	520	5	Surface	Total PAH	3.87E-01	3.51E-06	4.47E-06	7.40E-09		7.98E-06	75%
10	520	5	Surface	Uranium-238	1.45E+00	6.76E-07		2.02E-09	5.59E-07	1.24E-06	12%
10	**520**	**5**	**Surface**	**Totals**		**4.24E-06**	**4.47E-06**	**9.24E-07**	**9.75E-07**	**1.06E-05**	
10	**520**	**5**	**Surface**	**Percent**		**40%**	**42%**	**9%**	**9%**		
11	81	1	Surface	Aluminum	9.57E+03					0.00E+00	0%
11	81	1	Surface	Arsenic	1.03E+01	1.91E-05	5.61E-06	1.29E-08		2.47E-05	2%
11	81	1	Surface	Beryllium	7.57E-01			5.30E-10		5.30E-10	0%
11	81	1	Surface	Chromium	8.62E+01			2.11E-06		2.11E-06	0%
11	81	1	Surface	Mercury	8.33E+00					0.00E+00	0%
11	81	1	Surface	Nickel	7.29E+01			5.53E-09		5.53E-09	0%
11	81	1	Surface	PCB, Total	1.60E+02	3.97E-04	5.44E-04	4.49E-05		9.85E-04	96%
11	81	1	Surface	Silver	2.70E+00					0.00E+00	0%
11	81	1	Surface	Total PAH	5.53E-01	5.01E-06	6.38E-06	1.06E-08		1.14E-05	1%
11	81	1	Surface	Uranium	6.50E+03					0.00E+00	0%
11	81	1	Surface	Uranium-238	2.29E+00	1.07E-06		3.19E-09	8.80E-07	1.95E-06	0%
11	**81**	**1**	**Surface**	**Totals**		**4.22E-04**	**5.56E-04**	**4.71E-05**	**8.80E-07**	**1.03E-03**	
11	**81**	**1**	**Surface**	**Percent**		**41%**	**54%**	**5%**	**0%**		
11	153	1	Surface	PCB, Total	5.09E-01	1.26E-06	1.73E-06	1.43E-07		3.14E-06	64%
11	153	1	Surface	Total PAH	8.69E-02	7.88E-07	1.00E-06	1.66E-09		1.79E-06	36%
11	**153**	**1**	**Surface**	**Totals**		**2.05E-06**	**2.73E-06**	**1.45E-07**		**4.93E-06**	
11	**153**	**1**	**Surface**	**Percent**		**42%**	**55%**	**3%**			
11	156	1	Surface	Chromium	4.90E+01			1.20E-06		1.20E-06	18%
11	156	1	Surface	Manganese	2.83E+03					0.00E+00	0%
11	156	1	Surface	Mercury	9.87E+00					0.00E+00	0%
11	156	1	Surface	Nickel	6.16E+01			4.68E-09		4.68E-09	0%
11	156	1	Surface	PCB, Total	3.00E-01	7.45E-07	1.02E-06	8.44E-08		1.85E-06	28%
11	156	1	Surface	Total PAH	8.26E-02	7.48E-07	9.53E-07	1.58E-09		1.70E-06	26%
11	156	1	Surface	Uranium	2.32E+01					0.00E+00	0%
11	156	1	Surface	Uranium-238	2.19E+00	1.02E-06		3.05E-09	8.44E-07	1.87E-06	28%
11	**156**	**1**	**Surface**	**Totals**		**2.51E-06**	**1.97E-06**	**1.30E-06**	**8.44E-07**	**6.63E-06**	
11	**156**	**1**	**Surface**	**Percent**		**38%**	**30%**	**20%**	**13%**		
11	160	1	Surface	Antimony	6.80E-01					0.00E+00	0%
11	160	1	Surface	Total PAH	5.29E-02	4.79E-07	6.10E-07	1.01E-09		1.09E-06	100%
11	**160**	**1**	**Surface**	**Totals**		**4.79E-07**	**6.10E-07**	**1.01E-09**		**1.09E-06**	
11	**160**	**1**	**Surface**	**Percent**		**44%**	**56%**	**0%**			
11	163	1	Surface	Chromium	4.94E+01			1.21E-06		1.21E-06	27%
11	163	1	Surface	Total PAH	1.63E-01	1.48E-06	1.88E-06	3.12E-09		3.36E-06	73%
11	**163**	**1**	**Surface**	**Totals**		**1.48E-06**	**1.88E-06**	**1.22E-06**		**4.57E-06**	
11	**163**	**1**	**Surface**	**Percent**		**32%**	**41%**	**27%**			
11	219	1	Surface	Neptunium-237	3.31E-01	1.19E-07		8.74E-10	8.90E-07	1.01E-06	15%
11	219	1	Surface	Nickel	6.71E+01			5.10E-09		5.10E-09	0%
11	219	1	Surface	Total PAH	7.50E-02	6.80E-07	8.66E-07	1.43E-09		1.55E-06	23%
11	219	1	Surface	Uranium-235	1.92E-01	6.95E-08		2.89E-10	3.52E-07	4.22E-07	6%
11	219	1	Surface	Uranium-238	4.40E+00	2.05E-06		6.14E-09	1.69E-06	3.75E-06	56%
11	**219**	**1**	**Surface**	**Totals**		**2.92E-06**	**8.66E-07**	**1.38E-08**	**2.94E-06**	**6.74E-06**	
11	**219**	**1**	**Surface**	**Percent**		**43%**	**13%**	**0%**	**44%**		
11	488	1	Surface	Cesium-137	5.20E-01	5.00E-08		9.23E-13	4.46E-06	4.51E-06	6%
11	488	1	Surface	PCB, Total	1.03E+01	2.56E-05	3.51E-05	2.90E-06		6.35E-05	82%
11	488	1	Surface	Total PAH	2.50E-01	2.26E-06	2.88E-06	4.78E-09		5.15E-06	7%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.32. ELCR for the Outdoor Worker Exposed to Surface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
11	488	1	Surface	Uranium	1.48E+01					0.00E+00	0%
11	488	1	Surface	Uranium-235	1.49E-01	5.39E-08		2.25E-10	2.73E-07	3.28E-07	0%
11	488	1	Surface	Uranium-238	4.54E+00	2.12E-06		6.33E-09	1.75E-06	3.87E-06	5%
11	**488**	**1**	**Surface**	**Totals**		**3.01E-05**	**3.79E-05**	**2.91E-06**	**6.49E-06**	**7.74E-05**	
11	**488**	**1**	**Surface**	**Percent**		**39%**	**49%**	**4%**	**8%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	1	1	Subsurface	Aluminum	1.05E+04					0.00E+00	0%
5	1	1	Subsurface	Antimony	2.06E+00					0.00E+00	0%
5	1	1	Subsurface	Arsenic	6.74E+00	1.26E-05	3.69E-06	8.49E-09		1.63E-05	27%
5	1	1	Subsurface	Barium	1.46E+02					0.00E+00	0%
5	1	1	Subsurface	Beryllium	3.37E+00			2.36E-09		2.36E-09	0%
5	1	1	Subsurface	Cadmium	1.83E+00			9.61E-10		9.61E-10	0%
5	1	1	Subsurface	Cesium-137	5.91E-01	5.68E-08		1.05E-12	5.07E-06	5.13E-06	8%
5	1	1	Subsurface	Chromium	2.32E+01			5.69E-07		5.69E-07	1%
5	1	1	Subsurface	Cobalt	1.05E+01			2.77E-08		2.77E-08	0%
5	1	1	Subsurface	Manganese	1.00E+03					0.00E+00	0%
5	1	1	Subsurface	Neptunium-237	4.02E-01	1.45E-07		1.06E-09	1.08E-06	1.23E-06	2%
5	1	1	Subsurface	Nickel	1.62E+01			1.23E-09		1.23E-09	0%
5	1	1	Subsurface	PCB, Total	1.20E-01	2.98E-07	4.08E-07	3.38E-08		7.40E-07	1%
5	1	1	Subsurface	Plutonium-239/240	6.14E+00	3.76E-06		3.05E-08	4.15E-09	3.80E-06	6%
5	1	1	Subsurface	Thallium	8.92E-01					0.00E+00	0%
5	1	1	Subsurface	Thorium-230	4.40E+01	1.97E-05		1.87E-07	1.22E-07	2.00E-05	33%
5	1	1	Subsurface	Trichloroethene	6.90E-01	2.76E-07	6.75E-07	1.02E-05		1.11E-05	18%
5	1	1	Subsurface	Uranium-235	1.06E-01	3.84E-08		1.60E-10	1.94E-07	2.33E-07	0%
5	1	1	Subsurface	Uranium-238	1.97E+00	9.20E-07		2.75E-09	7.60E-07	1.68E-06	3%
5	1	1	Subsurface	Vanadium	3.29E+01					0.00E+00	0%
5	**1**	**1**	**Subsurface**	**Totals**		**3.78E-05**	**4.77E-06**	**1.10E-05**	**7.23E-06**	**6.08E-05**	
5	**1**	**1**	**Subsurface**	**Percent**		**62%**	**8%**	**18%**	**12%**		
5	1	2	Subsurface	Aluminum	9.14E+03					0.00E+00	0%
5	1	2	Subsurface	Arsenic	7.82E+00	1.46E-05	4.28E-06	9.85E-09		1.88E-05	1%
5	1	2	Subsurface	Barium	1.57E+02					0.00E+00	0%
5	1	2	Subsurface	Beryllium	5.07E+00			3.55E-09		3.55E-09	0%
5	1	2	Subsurface	Cadmium	3.74E+00			1.96E-09		1.96E-09	0%
5	1	2	Subsurface	Chromium	1.26E+02			3.08E-06		3.08E-06	0%
5	1	2	Subsurface	cis-1,2-Dichloroethene	2.40E+03					0.00E+00	0%
5	1	2	Subsurface	Copper	1.13E+02					0.00E+00	0%
5	1	2	Subsurface	Manganese	7.28E+02					0.00E+00	0%
5	1	2	Subsurface	Mercury	7.06E+00					0.00E+00	0%
5	1	2	Subsurface	Nickel	4.96E+01			3.77E-09		3.77E-09	0%
5	1	2	Subsurface	PCB, Total	3.21E+01	7.97E-05	1.09E-04	9.03E-06		1.98E-04	15%
5	1	2	Subsurface	Silver	7.39E+01					0.00E+00	0%
5	1	2	Subsurface	Thallium	3.70E-01					0.00E+00	0%
5	1	2	Subsurface	trans-1,2-Dichloroethene	8.93E+00					0.00E+00	0%
5	1	2	Subsurface	Trichloroethene	6.48E+01	2.59E-05	6.34E-05	9.55E-04		1.04E-03	81%
5	1	2	Subsurface	Vanadium	3.22E+01					0.00E+00	0%
5	1	2	Subsurface	Vinyl chloride	4.47E+00	4.00E-06	9.78E-06	6.05E-06		1.98E-05	2%
5	**1**	**2**	**Subsurface**	**Totals**		**1.24E-04**	**1.87E-04**	**9.73E-04**		**1.28E-03**	
5	**1**	**2**	**Subsurface**	**Percent**		**10%**	**15%**	**76%**			
5	1	3	Subsurface	Antimony	3.80E-01					0.00E+00	0%
5	1	3	Subsurface	Arsenic	6.24E+00	1.16E-05	3.41E-06	7.85E-09		1.50E-05	84%
5	1	3	Subsurface	Barium	1.34E+02					0.00E+00	0%
5	1	3	Subsurface	Cadmium	3.32E+00			1.74E-09		1.74E-09	0%
5	1	3	Subsurface	Manganese	5.13E+02					0.00E+00	0%
5	1	3	Subsurface	Nickel	2.16E+01			1.64E-09		1.64E-09	0%
5	1	3	Subsurface	PCB, Total	2.08E-01	5.16E-07	7.08E-07	5.85E-08		1.28E-06	7%
5	1	3	Subsurface	Uranium-238	1.73E+00	8.07E-07		2.41E-09	6.66E-07	1.48E-06	8%
5	**1**	**3**	**Subsurface**	**Totals**		**1.29E-05**	**4.12E-06**	**7.22E-08**	**6.66E-07**	**1.78E-05**	
5	**1**	**3**	**Subsurface**	**Percent**		**73%**	**23%**	**0%**	**4%**		
5	1	4	Subsurface	Beryllium	7.52E-01			5.27E-10		5.27E-10	0%
5	1	4	Subsurface	Cadmium	2.09E+00			1.10E-09		1.10E-09	0%
5	1	4	Subsurface	Cesium-137	3.37E-01	3.24E-08		5.98E-13	2.89E-06	2.92E-06	25%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	1	4	Subsurface	Chromium	7.09E+01			1.74E-06		1.74E-06	15%
5	1	4	Subsurface	Cobalt-60	2.20E-02	1.97E-09		1.18E-13	9.22E-07	9.24E-07	8%
5	1	4	Subsurface	Nickel	2.81E+01			2.13E-09		2.13E-09	0%
5	1	4	Subsurface	PCB, Total	9.24E-02	2.29E-07	3.14E-07	2.60E-08		5.70E-07	5%
5	1	4	Subsurface	Thorium-230	5.03E+00	2.26E-06		2.14E-08	1.39E-08	2.29E-06	20%
5	1	4	Subsurface	Trichloroethene	1.90E-01	7.59E-08	1.86E-07	2.80E-06		3.06E-06	27%
5	1	4	Subsurface	Vanadium	2.87E+01					0.00E+00	0%
5	**1**	**4**	**Subsurface**	**Totals**		**2.60E-06**	**5.00E-07**	**4.59E-06**	**3.83E-06**	**1.15E-05**	
5	**1**	**4**	**Subsurface**	**Percent**		**23%**	**4%**	**40%**	**33%**		
5	1	5	Subsurface	Aluminum	1.20E+04					0.00E+00	0%
5	1	5	Subsurface	Arsenic	1.67E+01	3.11E-05	9.13E-06	2.10E-08		4.02E-05	91%
5	1	5	Subsurface	Barium	2.15E+02					0.00E+00	0%
5	1	5	Subsurface	Beryllium	8.30E+00			5.82E-09		5.82E-09	0%
5	1	5	Subsurface	Cadmium	2.97E+00			1.56E-09		1.56E-09	0%
5	1	5	Subsurface	Cobalt	1.43E+01			3.76E-08		3.76E-08	0%
5	1	5	Subsurface	Manganese	2.16E+03					0.00E+00	0%
5	1	5	Subsurface	Nickel	4.07E+01			3.09E-09		3.09E-09	0%
5	1	5	Subsurface	PCB, Total	2.70E-01	6.70E-07	9.19E-07	7.59E-08		1.67E-06	4%
5	1	5	Subsurface	Total PAH	9.83E-02	8.91E-07	1.13E-06	1.88E-09		2.03E-06	5%
5	**1**	**5**	**Subsurface**	**Totals**		**3.27E-05**	**1.12E-05**	**1.47E-07**		**4.40E-05**	
5	**1**	**5**	**Subsurface**	**Percent**		**74%**	**25%**	**0%**			
5	99	1	Subsurface	Aluminum	1.16E+04					0.00E+00	0%
5	99	1	Subsurface	Arsenic	9.94E+00	1.85E-05	5.43E-06	1.25E-08		2.39E-05	89%
5	99	1	Subsurface	Barium	1.35E+02					0.00E+00	0%
5	99	1	Subsurface	Beryllium	7.22E-01			5.06E-10		5.06E-10	0%
5	99	1	Subsurface	Chromium	6.29E+01			1.54E-06		1.54E-06	6%
5	99	1	Subsurface	Cobalt-60	1.19E-02	1.06E-09		6.36E-14	4.99E-07	5.00E-07	2%
5	99	1	Subsurface	Manganese	6.28E+02					0.00E+00	0%
5	99	1	Subsurface	Mercury	9.53E+00					0.00E+00	0%
5	99	1	Subsurface	Nickel	8.52E+01			6.47E-09		6.47E-09	0%
5	99	1	Subsurface	Silver	1.03E+01					0.00E+00	0%
5	99	1	Subsurface	Uranium	1.61E+01					0.00E+00	0%
5	99	1	Subsurface	Uranium-238	9.45E-01	4.41E-07		1.32E-09	3.64E-07	8.06E-07	3%
5	**99**	**1**	**Subsurface**	**Totals**		**1.89E-05**	**5.43E-06**	**1.56E-06**	**8.63E-07**	**2.68E-05**	
5	**99**	**1**	**Subsurface**	**Percent**		**71%**	**20%**	**6%**	**3%**		
5	99	2	Subsurface	Chromium	4.57E+01			1.12E-06		1.12E-06	100%
5	**99**	**2**	**Subsurface**	**Totals**				**1.12E-06**		**1.12E-06**	
5	**99**	**2**	**Subsurface**	**Percent**				**100%**			
5	194	1	Subsurface	Antimony	8.62E-01					0.00E+00	0%
5	194	1	Subsurface	Arsenic	1.02E+01	1.90E-05	5.57E-06	1.28E-08		2.46E-05	95%
5	194	1	Subsurface	Beryllium	5.96E-01			4.18E-10		4.18E-10	0%
5	194	1	Subsurface	Chromium	5.11E+01			1.25E-06		1.25E-06	5%
5	194	1	Subsurface	Manganese	5.82E+02					0.00E+00	0%
5	194	1	Subsurface	Mercury	6.71E+00					0.00E+00	0%
5	194	1	Subsurface	Nickel	6.12E+01			4.64E-09		4.64E-09	0%
5	194	1	Subsurface	Silver	1.09E+01					0.00E+00	0%
5	194	1	Subsurface	Thallium	3.84E-01					0.00E+00	0%
5	194	1	Subsurface	Vanadium	3.74E+01					0.00E+00	0%
5	**194**	**1**	**Subsurface**	**Totals**		**1.90E-05**	**5.57E-06**	**1.27E-06**		**2.58E-05**	
5	**194**	**1**	**Subsurface**	**Percent**		**73%**	**22%**	**5%**			
5	194	2	Subsurface	Antimony	6.59E-01					0.00E+00	0%
5	194	2	Subsurface	Arsenic	1.02E+01	1.90E-05	5.57E-06	1.28E-08		2.46E-05	91%
5	194	2	Subsurface	Beryllium	6.96E-01			4.88E-10		4.88E-10	0%
5	194	2	Subsurface	Chromium	5.96E+01			1.46E-06		1.46E-06	5%
5	194	2	Subsurface	Manganese	7.01E+02					0.00E+00	0%
5	194	2	Subsurface	Mercury	6.90E+00					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	2	Subsurface	Silver	1.39E+01					0.00E+00	0%
5	194	2	Subsurface	Uranium	2.68E+01					0.00E+00	0%
5	194	2	Subsurface	Uranium-238	1.24E+00	5.76E-07		1.72E-09	4.76E-07	1.05E-06	4%
5	194	2	Subsurface	Vanadium	3.55E+01					0.00E+00	0%
5	**194**	**2**	**Subsurface**	**Totals**		**1.95E-05**	**5.57E-06**	**1.48E-06**	**4.76E-07**	**2.71E-05**	
5	**194**	**2**	**Subsurface**	**Percent**		**72%**	**21%**	**5%**	**2%**		
5	194	3	Subsurface	Antimony	5.92E-01					0.00E+00	0%
5	194	3	Subsurface	Arsenic	1.44E+01	2.69E-05	7.89E-06	1.82E-08		3.48E-05	88%
5	194	3	Subsurface	Cesium-137	2.35E-01	2.26E-08		4.17E-13	2.02E-06	2.04E-06	5%
5	194	3	Subsurface	Chromium	4.98E+01			1.22E-06		1.22E-06	3%
5	194	3	Subsurface	Nickel	6.32E+01			4.80E-09		4.80E-09	0%
5	194	3	Subsurface	Total PAH	3.39E-02	3.07E-07	3.91E-07	6.48E-10		6.99E-07	2%
5	194	3	Subsurface	Uranium-238	1.16E+00	5.42E-07		1.62E-09	4.48E-07	9.91E-07	2%
5	**194**	**3**	**Subsurface**	**Totals**		**2.77E-05**	**8.28E-06**	**1.25E-06**	**2.46E-06**	**3.97E-05**	
5	**194**	**3**	**Subsurface**	**Percent**		**70%**	**21%**	**3%**	**6%**		
5	194	4	Subsurface	Aluminum	8.50E+03					0.00E+00	0%
5	194	4	Subsurface	Arsenic	1.02E+01	1.90E-05	5.60E-06	1.29E-08		2.47E-05	86%
5	194	4	Subsurface	Beryllium	5.87E-01			4.11E-10		4.11E-10	0%
5	194	4	Subsurface	Cesium-137	1.44E-01	1.38E-08		2.56E-13	1.24E-06	1.25E-06	4%
5	194	4	Subsurface	Chromium	5.59E+01			1.37E-06		1.37E-06	5%
5	194	4	Subsurface	Iron	1.83E+04					0.00E+00	0%
5	194	4	Subsurface	Manganese	4.76E+02					0.00E+00	0%
5	194	4	Subsurface	Mercury	8.92E+00					0.00E+00	0%
5	194	4	Subsurface	Nickel	8.15E+01			6.19E-09		6.19E-09	0%
5	194	4	Subsurface	Silver	1.23E+01					0.00E+00	0%
5	194	4	Subsurface	Total PAH	2.85E-02	2.58E-07	3.29E-07	5.45E-10		5.88E-07	2%
5	194	4	Subsurface	Uranium-238	1.02E+00	4.77E-07		1.43E-09	3.94E-07	8.72E-07	3%
5	194	4	Subsurface	Vanadium	3.07E+01					0.00E+00	0%
5	**194**	**4**	**Subsurface**	**Totals**		**1.98E-05**	**5.92E-06**	**1.39E-06**	**1.63E-06**	**2.87E-05**	
5	**194**	**4**	**Subsurface**	**Percent**		**69%**	**21%**	**5%**	**6%**		
5	194	5	Subsurface	Aluminum	9.38E+03					0.00E+00	0%
5	194	5	Subsurface	Arsenic	9.71E+00	1.81E-05	5.31E-06	1.22E-08		2.34E-05	67%
5	194	5	Subsurface	Beryllium	6.26E-01			4.39E-10		4.39E-10	0%
5	194	5	Subsurface	Chromium	5.54E+01			1.36E-06		1.36E-06	4%
5	194	5	Subsurface	Manganese	1.39E+03					0.00E+00	0%
5	194	5	Subsurface	Mercury	8.69E+00					0.00E+00	0%
5	194	5	Subsurface	Nickel	7.56E+01			5.74E-09		5.74E-09	0%
5	194	5	Subsurface	Silver	1.29E+01					0.00E+00	0%
5	194	5	Subsurface	Total PAH	4.50E-01	4.08E-06	5.19E-06	8.60E-09		9.28E-06	27%
5	194	5	Subsurface	Uranium-238	1.11E+00	5.18E-07		1.55E-09	4.28E-07	9.48E-07	3%
5	194	5	Subsurface	Vanadium	3.19E+01					0.00E+00	0%
5	**194**	**5**	**Subsurface**	**Totals**		**2.27E-05**	**1.05E-05**	**1.39E-06**	**4.28E-07**	**3.50E-05**	
5	**194**	**5**	**Subsurface**	**Percent**		**65%**	**30%**	**4%**	**1%**		
5	194	6	Subsurface	Manganese	1.37E+03					0.00E+00	0%
5	194	6	Subsurface	Nickel	6.98E+01			5.30E-09		5.30E-09	1%
5	194	6	Subsurface	Silver	9.89E+00					0.00E+00	0%
5	194	6	Subsurface	Uranium-238	1.12E+00	5.21E-07		1.56E-09	4.30E-07	9.53E-07	99%
5	**194**	**6**	**Subsurface**	**Totals**		**5.21E-07**		**6.86E-09**	**4.30E-07**	**9.58E-07**	
5	**194**	**6**	**Subsurface**	**Percent**		**54%**		**1%**	**45%**		
5	194	7	Subsurface	Arsenic	1.02E+01	1.90E-05	5.58E-06	1.29E-08		2.46E-05	95%
5	194	7	Subsurface	Chromium	5.32E+01			1.30E-06		1.30E-06	5%
5	194	7	Subsurface	Manganese	7.86E+02					0.00E+00	0%
5	194	7	Subsurface	Nickel	7.71E+01			5.86E-09		5.86E-09	0%
5	194	7	Subsurface	Silver	1.25E+01					0.00E+00	0%
5	**194**	**7**	**Subsurface**	**Totals**		**1.90E-05**	**5.58E-06**	**1.32E-06**		**2.59E-05**	
5	**194**	**7**	**Subsurface**	**Percent**		**73%**	**22%**	**5%**			

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	8	Subsurface	Antimony	5.58E-01					0.00E+00	0%
5	194	8	Subsurface	Arsenic	1.09E+01	2.02E-05	5.95E-06	1.37E-08		2.62E-05	67%
5	194	8	Subsurface	Bis(2-ethylhexyl)phthalate	1.50E+01	2.61E-07	2.55E-07	1.05E-11		5.16E-07	1%
5	194	8	Subsurface	Cesium-137	2.78E-01	2.67E-08		4.94E-13	2.39E-06	2.41E-06	6%
5	194	8	Subsurface	Chromium	6.09E+01			1.49E-06		1.49E-06	4%
5	194	8	Subsurface	Cobalt	1.33E+01			3.49E-08		3.49E-08	0%
5	194	8	Subsurface	Manganese	1.33E+03					0.00E+00	0%
5	194	8	Subsurface	Nickel	6.01E+01			4.56E-09		4.56E-09	0%
5	194	8	Subsurface	Total PAH	3.74E-01	3.39E-06	4.31E-06	7.15E-09		7.71E-06	20%
5	194	8	Subsurface	Uranium-238	1.18E+00	5.50E-07		1.65E-09	4.55E-07	1.01E-06	3%
5	**194**	**8**	**Subsurface**	**Totals**		**2.45E-05**	**1.05E-05**	**1.56E-06**	**2.84E-06**	**3.94E-05**	
5	**194**	**8**	**Subsurface**	**Percent**		**62%**	**27%**	**4%**	**7%**		
5	194	9	Subsurface	Arsenic	9.77E+00	1.82E-05	5.35E-06	1.23E-08		2.36E-05	96%
5	194	9	Subsurface	Chromium	4.48E+01			1.10E-06		1.10E-06	4%
5	194	9	Subsurface	Manganese	5.54E+02					0.00E+00	0%
5	194	9	Subsurface	Nickel	5.98E+01			4.54E-09		4.54E-09	0%
5	194	9	Subsurface	Silver	1.07E+01					0.00E+00	0%
5	**194**	**9**	**Subsurface**	**Totals**		**1.82E-05**	**5.35E-06**	**1.12E-06**		**2.47E-05**	
5	**194**	**9**	**Subsurface**	**Percent**		**74%**	**22%**	**5%**			
5	194	10	Subsurface	Arsenic	1.10E+01	2.05E-05	6.03E-06	1.39E-08		2.66E-05	67%
5	194	10	Subsurface	Cesium-137	5.81E-01	5.58E-08		1.03E-12	4.99E-06	5.04E-06	13%
5	194	10	Subsurface	Chromium	5.00E+01			1.23E-06		1.23E-06	3%
5	194	10	Subsurface	Mercury	8.07E+00					0.00E+00	0%
5	194	10	Subsurface	Nickel	7.60E+01			5.77E-09		5.77E-09	0%
5	194	10	Subsurface	Thallium	4.50E-01					0.00E+00	0%
5	194	10	Subsurface	Total PAH	2.57E-01	2.33E-06	2.97E-06	4.92E-09		5.30E-06	13%
5	194	10	Subsurface	Uranium-238	1.49E+00	6.95E-07		2.08E-09	5.74E-07	1.27E-06	3%
5	**194**	**10**	**Subsurface**	**Totals**		**2.36E-05**	**8.99E-06**	**1.25E-06**	**5.56E-06**	**3.94E-05**	
5	**194**	**10**	**Subsurface**	**Percent**		**60%**	**23%**	**3%**	**14%**		
5	194	11	Subsurface	Arsenic	1.08E+01	2.00E-05	5.88E-06	1.36E-08		2.59E-05	88%
5	194	11	Subsurface	Chromium	5.66E+01			1.39E-06		1.39E-06	5%
5	194	11	Subsurface	Mercury	8.09E+00					0.00E+00	0%
5	194	11	Subsurface	Nickel	1.01E+02			7.64E-09		7.64E-09	0%
5	194	11	Subsurface	PCB, Total	8.40E-02	2.09E-07	2.86E-07	2.36E-08		5.18E-07	2%
5	194	11	Subsurface	Silver	1.33E+01					0.00E+00	0%
5	194	11	Subsurface	Thallium	3.70E-01					0.00E+00	0%
5	194	11	Subsurface	Total PAH	7.95E-02	7.21E-07	9.17E-07	1.52E-09		1.64E-06	6%
5	**194**	**11**	**Subsurface**	**Totals**		**2.10E-05**	**7.09E-06**	**1.43E-06**		**2.95E-05**	
5	**194**	**11**	**Subsurface**	**Percent**		**71%**	**24%**	**5%**			
5	194	12	Subsurface	Arsenic	9.18E+00	1.71E-05	5.02E-06	1.16E-08		2.21E-05	58%
5	194	12	Subsurface	Chromium	6.34E+01			1.55E-06		1.55E-06	4%
5	194	12	Subsurface	Manganese	7.31E+02					0.00E+00	0%
5	194	12	Subsurface	Nickel	7.86E+01			5.97E-09		5.97E-09	0%
5	194	12	Subsurface	Silver	1.54E+01					0.00E+00	0%
5	194	12	Subsurface	Total PAH	7.07E-01	6.41E-06	8.15E-06	1.35E-08		1.46E-05	38%
5	**194**	**12**	**Subsurface**	**Totals**		**2.35E-05**	**1.32E-05**	**1.58E-06**		**3.83E-05**	
5	**194**	**12**	**Subsurface**	**Percent**		**61%**	**34%**	**4%**			
5	194	13	Subsurface	Arsenic	9.90E+00	1.84E-05	5.41E-06	1.25E-08		2.39E-05	89%
5	194	13	Subsurface	Chromium	6.25E+01			1.53E-06		1.53E-06	6%
5	194	13	Subsurface	Manganese	6.05E+02					0.00E+00	0%
5	194	13	Subsurface	Nickel	6.80E+01			5.16E-09		5.16E-09	0%
5	194	13	Subsurface	Total PAH	6.73E-02	6.10E-07	7.76E-07	1.29E-09		1.39E-06	5%
5	**194**	**13**	**Subsurface**	**Totals**		**1.90E-05**	**6.19E-06**	**1.55E-06**		**2.68E-05**	
5	**194**	**13**	**Subsurface**	**Percent**		**71%**	**23%**	**6%**			
5	194	14	Subsurface	Aluminum	1.26E+04					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	14	Subsurface	Arsenic	1.09E+01	2.02E-05	5.93E-06	1.37E-08		2.61E-05	95%
5	194	14	Subsurface	Chromium	6.09E+01			1.49E-06		1.49E-06	5%
5	194	14	Subsurface	Manganese	7.02E+02					0.00E+00	0%
5	194	14	Subsurface	Mercury	8.94E+00					0.00E+00	0%
5	194	14	Subsurface	Nickel	7.09E+01			5.38E-09		5.38E-09	0%
5	194	14	Subsurface	Vanadium	3.51E+01					0.00E+00	0%
5	**194**	**14**	**Subsurface**	**Totals**		**2.02E-05**	**5.93E-06**	**1.51E-06**		**2.76E-05**	
5	**194**	**14**	**Subsurface**	**Percent**		**73%**	**21%**	**5%**			
5	194	15	Subsurface	Arsenic	8.95E+00	1.67E-05	4.89E-06	1.13E-08		2.16E-05	94%
5	194	15	Subsurface	Chromium	6.06E+01			1.49E-06		1.49E-06	6%
5	194	15	Subsurface	Manganese	6.10E+02					0.00E+00	0%
5	194	15	Subsurface	Nickel	7.98E+01			6.06E-09		6.06E-09	0%
5	194	15	Subsurface	Silver	1.17E+01					0.00E+00	0%
5	**194**	**15**	**Subsurface**	**Totals**		**1.67E-05**	**4.89E-06**	**1.50E-06**		**2.31E-05**	
5	**194**	**15**	**Subsurface**	**Percent**		**72%**	**21%**	**7%**			
5	194	16	Subsurface	Antimony	5.08E-01					0.00E+00	0%
5	194	16	Subsurface	Arsenic	1.09E+01	2.04E-05	5.98E-06	1.38E-08		2.63E-05	95%
5	194	16	Subsurface	Beryllium	6.46E-01			4.53E-10		4.53E-10	0%
5	194	16	Subsurface	Chromium	5.32E+01			1.31E-06		1.31E-06	5%
5	194	16	Subsurface	Manganese	1.72E+03					0.00E+00	0%
5	194	16	Subsurface	Nickel	8.59E+01			6.52E-09		6.52E-09	0%
5	194	16	Subsurface	Silver	1.23E+01					0.00E+00	0%
5	194	16	Subsurface	Thallium	3.81E-01					0.00E+00	0%
5	194	16	Subsurface	Vanadium	3.24E+01					0.00E+00	0%
5	**194**	**16**	**Subsurface**	**Totals**		**2.04E-05**	**5.98E-06**	**1.33E-06**		**2.77E-05**	
5	**194**	**16**	**Subsurface**	**Percent**		**74%**	**22%**	**5%**			
5	194	17	Subsurface	Arsenic	1.12E+01	2.08E-05	6.10E-06	1.40E-08		2.69E-05	83%
5	194	17	Subsurface	Cadmium	8.52E-01			4.48E-10		4.48E-10	0%
5	194	17	Subsurface	Cesium-137	2.53E-01	2.43E-08		4.49E-13	2.17E-06	2.20E-06	7%
5	194	17	Subsurface	Chromium	5.45E+01			1.34E-06		1.34E-06	4%
5	194	17	Subsurface	Nickel	6.94E+01			5.27E-09		5.27E-09	0%
5	194	17	Subsurface	Total PAH	1.04E-01	9.42E-07	1.20E-06	1.99E-09		2.14E-06	7%
5	**194**	**17**	**Subsurface**	**Totals**		**2.17E-05**	**7.30E-06**	**1.36E-06**	**2.17E-06**	**3.26E-05**	
5	**194**	**17**	**Subsurface**	**Percent**		**67%**	**22%**	**4%**	**7%**		
5	194	18	Subsurface	Aluminum	1.67E+04					0.00E+00	0%
5	194	18	Subsurface	Antimony	5.94E-01					0.00E+00	0%
5	194	18	Subsurface	Arsenic	1.19E+01	2.21E-05	6.49E-06	1.50E-08		2.86E-05	94%
5	194	18	Subsurface	Beryllium	7.21E-01			5.05E-10		5.05E-10	0%
5	194	18	Subsurface	Chromium	6.85E+01			1.68E-06		1.68E-06	6%
5	194	18	Subsurface	Iron	2.10E+04					0.00E+00	0%
5	194	18	Subsurface	Manganese	7.72E+02					0.00E+00	0%
5	194	18	Subsurface	Nickel	9.80E+01			7.44E-09		7.44E-09	0%
5	194	18	Subsurface	Thallium	3.04E-01					0.00E+00	0%
5	194	18	Subsurface	Vanadium	3.90E+01					0.00E+00	0%
5	**194**	**18**	**Subsurface**	**Totals**		**2.21E-05**	**6.49E-06**	**1.70E-06**		**3.03E-05**	
5	**194**	**18**	**Subsurface**	**Percent**		**73%**	**21%**	**6%**			
5	194	19	Subsurface	Arsenic	9.96E+00	1.85E-05	5.45E-06	1.25E-08		2.40E-05	95%
5	194	19	Subsurface	Chromium	4.84E+01			1.19E-06		1.19E-06	5%
5	194	19	Subsurface	Nickel	6.83E+01			5.18E-09		5.18E-09	0%
5	194	19	Subsurface	Silver	9.44E+00					0.00E+00	0%
5	**194**	**19**	**Subsurface**	**Totals**		**1.85E-05**	**5.45E-06**	**1.20E-06**		**2.52E-05**	
5	**194**	**19**	**Subsurface**	**Percent**		**74%**	**22%**	**5%**			
5	194	20	Subsurface	Arsenic	1.14E+01	2.13E-05	6.26E-06	1.44E-08		2.76E-05	93%
5	194	20	Subsurface	Barium	2.35E+02					0.00E+00	0%
5	194	20	Subsurface	Beryllium	8.66E-01			6.07E-10		6.07E-10	0%
5	194	20	Subsurface	Chromium	7.11E+01			1.74E-06		1.74E-06	6%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	20	Subsurface	Cobalt	1.48E+01			3.90E-08		3.90E-08	0%
5	194	20	Subsurface	Manganese	2.33E+03					0.00E+00	0%
5	194	20	Subsurface	Mercury	7.28E+00					0.00E+00	0%
5	194	20	Subsurface	Nickel	6.57E+01			4.99E-09		4.99E-09	0%
5	194	20	Subsurface	Silver	1.08E+01					0.00E+00	0%
5	194	20	Subsurface	Total PAH	2.08E-02	1.88E-07	2.40E-07	3.98E-10		4.29E-07	1%
5	194	20	Subsurface	Vanadium	3.29E+01					0.00E+00	0%
5	**194**	**20**	**Subsurface**	**Totals**		**2.15E-05**	**6.50E-06**	**1.80E-06**		**2.98E-05**	
5	**194**	**20**	**Subsurface**	**Percent**		**72%**	**22%**	**6%**			
5	194	21	Subsurface	Antimony	9.30E-01					0.00E+00	0%
5	194	21	Subsurface	Arsenic	3.52E+01	6.55E-05	1.93E-05	4.43E-08		8.48E-05	98%
5	194	21	Subsurface	Barium	2.96E+03					0.00E+00	0%
5	194	21	Subsurface	Beryllium	1.80E+00			1.26E-09		1.26E-09	0%
5	194	21	Subsurface	Chromium	5.51E+01			1.35E-06		1.35E-06	2%
5	194	21	Subsurface	Cobalt	8.31E+01			2.18E-07		2.18E-07	0%
5	194	21	Subsurface	Iron	4.73E+04					0.00E+00	0%
5	194	21	Subsurface	Manganese	3.11E+04					0.00E+00	0%
5	194	21	Subsurface	Mercury	6.62E+00					0.00E+00	0%
5	194	21	Subsurface	Nickel	7.01E+01			5.32E-09		5.32E-09	0%
5	194	21	Subsurface	Thallium	1.40E+00					0.00E+00	0%
5	194	21	Subsurface	Vanadium	8.63E+01					0.00E+00	0%
5	**194**	**21**	**Subsurface**	**Totals**		**6.55E-05**	**1.93E-05**	**1.62E-06**		**8.64E-05**	
5	**194**	**21**	**Subsurface**	**Percent**		**76%**	**22%**	**2%**			
5	194	22	Subsurface	Aluminum	1.13E+04					0.00E+00	0%
5	194	22	Subsurface	Antimony	5.29E-01					0.00E+00	0%
5	194	22	Subsurface	Arsenic	1.15E+01	2.14E-05	6.29E-06	1.45E-08		2.77E-05	29%
5	194	22	Subsurface	Cesium-137	1.62E-01	1.56E-08		2.88E-13	1.39E-06	1.41E-06	1%
5	194	22	Subsurface	Chromium	4.75E+01			1.17E-06		1.17E-06	1%
5	194	22	Subsurface	Cobalt	1.08E+01			2.83E-08		2.83E-08	0%
5	194	22	Subsurface	Manganese	1.06E+03					0.00E+00	0%
5	194	22	Subsurface	Nickel	7.08E+01			5.37E-09		5.37E-09	0%
5	194	22	Subsurface	PCB, Total	1.04E+01	2.58E-05	3.54E-05	2.93E-06		6.41E-05	68%
5	194	22	Subsurface	Silver	1.14E+01					0.00E+00	0%
5	**194**	**22**	**Subsurface**	**Totals**		**4.72E-05**	**4.17E-05**	**4.14E-06**	**1.39E-06**	**9.45E-05**	
5	**194**	**22**	**Subsurface**	**Percent**		**50%**	**44%**	**4%**	**1%**		
5	194	23	Subsurface	Arsenic	1.12E+01	2.09E-05	6.14E-06	1.41E-08		2.71E-05	87%
5	194	23	Subsurface	Cadmium	6.58E+00			3.46E-09		3.46E-09	0%
5	194	23	Subsurface	Cesium-137	2.83E-01	2.72E-08		5.02E-13	2.43E-06	2.46E-06	8%
5	194	23	Subsurface	Chromium	5.90E+01			1.45E-06		1.45E-06	5%
5	194	23	Subsurface	Iron	1.94E+04					0.00E+00	0%
5	194	23	Subsurface	Manganese	7.24E+02					0.00E+00	0%
5	194	23	Subsurface	Mercury	7.75E+00					0.00E+00	0%
5	194	23	Subsurface	Nickel	7.33E+01			5.57E-09		5.57E-09	0%
5	194	23	Subsurface	Silver	1.04E+01					0.00E+00	0%
5	**194**	**23**	**Subsurface**	**Totals**		**2.09E-05**	**6.14E-06**	**1.47E-06**	**2.43E-06**	**3.10E-05**	
5	**194**	**23**	**Subsurface**	**Percent**		**68%**	**20%**	**5%**	**8%**		
5	194	24	Subsurface	Arsenic	1.19E+01	2.22E-05	6.52E-06	1.50E-08		2.87E-05	90%
5	194	24	Subsurface	Beryllium	6.50E-01			4.55E-10		4.55E-10	0%
5	194	24	Subsurface	Cesium-137	2.13E-01	2.05E-08		3.78E-13	1.83E-06	1.85E-06	6%
5	194	24	Subsurface	Chromium	4.67E+01			1.15E-06		1.15E-06	4%
5	194	24	Subsurface	Iron	2.31E+04					0.00E+00	0%
5	194	24	Subsurface	Manganese	6.03E+02					0.00E+00	0%
5	194	24	Subsurface	Mercury	7.03E+00					0.00E+00	0%
5	194	24	Subsurface	Nickel	8.41E+01			6.39E-09		6.39E-09	0%
5	194	24	Subsurface	Total PAH	1.49E-02	1.35E-07	1.72E-07	2.85E-10		3.07E-07	1%
5	**194**	**24**	**Subsurface**	**Totals**		**2.23E-05**	**6.69E-06**	**1.17E-06**	**1.83E-06**	**3.20E-05**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	**194**	**24**	**Subsurface**	**Percent**		**70%**	**21%**	**4%**	**6%**		
5	194	25	Subsurface	Aluminum	1.45E+04					0.00E+00	0%
5	194	25	Subsurface	Arsenic	1.05E+01	1.96E-05	5.75E-06	1.32E-08		2.53E-05	94%
5	194	25	Subsurface	Barium	3.00E+02					0.00E+00	0%
5	194	25	Subsurface	Beryllium	8.30E-01			5.82E-10		5.82E-10	0%
5	194	25	Subsurface	Chromium	5.23E+01			1.28E-06		1.28E-06	5%
5	194	25	Subsurface	Manganese	9.90E+02					0.00E+00	0%
5	194	25	Subsurface	Nickel	6.33E+01			4.81E-09		4.81E-09	0%
5	194	25	Subsurface	Total PAH	2.06E-02	1.87E-07	2.38E-07	3.94E-10		4.25E-07	2%
5	**194**	**25**	**Subsurface**	**Totals**		**1.98E-05**	**5.99E-06**	**1.30E-06**		**2.70E-05**	
5	**194**	**25**	**Subsurface**	**Percent**		**73%**	**22%**	**5%**			
5	194	26	Subsurface	Aluminum	1.21E+04					0.00E+00	0%
5	194	26	Subsurface	Arsenic	9.09E+00	1.69E-05	4.97E-06	1.14E-08		2.19E-05	95%
5	194	26	Subsurface	Beryllium	7.31E-01			5.12E-10		5.12E-10	0%
5	194	26	Subsurface	Chromium	4.81E+01			1.18E-06		1.18E-06	5%
5	194	26	Subsurface	Cobalt	1.34E+01			3.53E-08		3.53E-08	0%
5	194	26	Subsurface	Manganese	6.25E+02					0.00E+00	0%
5	194	26	Subsurface	Silver	1.03E+01					0.00E+00	0%
5	194	26	Subsurface	Thallium	3.12E-01					0.00E+00	0%
5	194	26	Subsurface	Vanadium	3.84E+01					0.00E+00	0%
5	**194**	**26**	**Subsurface**	**Totals**		**1.69E-05**	**4.97E-06**	**1.23E-06**		**2.31E-05**	
5	**194**	**26**	**Subsurface**	**Percent**		**73%**	**22%**	**5%**			
5	194	27	Subsurface	Antimony	4.96E-01					0.00E+00	0%
5	194	27	Subsurface	Arsenic	1.07E+01	1.98E-05	5.82E-06	1.34E-08		2.57E-05	95%
5	194	27	Subsurface	Chromium	5.16E+01			1.27E-06		1.27E-06	5%
5	194	27	Subsurface	Nickel	6.55E+01			4.97E-09		4.97E-09	0%
5	194	27	Subsurface	Silver	1.03E+01					0.00E+00	0%
5	**194**	**27**	**Subsurface**	**Totals**		**1.98E-05**	**5.82E-06**	**1.28E-06**		**2.69E-05**	
5	**194**	**27**	**Subsurface**	**Percent**		**74%**	**22%**	**5%**			
5	194	28	Subsurface	Arsenic	1.13E+01	2.10E-05	6.17E-06	1.42E-08		2.72E-05	95%
5	194	28	Subsurface	Beryllium	7.41E-01			5.19E-10		5.19E-10	0%
5	194	28	Subsurface	Chromium	6.36E+01			1.56E-06		1.56E-06	5%
5	194	28	Subsurface	Manganese	1.21E+03					0.00E+00	0%
5	194	28	Subsurface	Nickel	6.89E+01			5.23E-09		5.23E-09	0%
5	194	28	Subsurface	Silver	1.52E+01					0.00E+00	0%
5	194	28	Subsurface	Vanadium	3.85E+01					0.00E+00	0%
5	**194**	**28**	**Subsurface**	**Totals**		**2.10E-05**	**6.17E-06**	**1.58E-06**		**2.88E-05**	
5	**194**	**28**	**Subsurface**	**Percent**		**73%**	**21%**	**5%**			
5	194	29	Subsurface	Aluminum	1.32E+04					0.00E+00	0%
5	194	29	Subsurface	Antimony	7.10E-01					0.00E+00	0%
5	194	29	Subsurface	Arsenic	1.43E+01	2.66E-05	7.82E-06	1.80E-08		3.44E-05	96%
5	194	29	Subsurface	Barium	1.88E+02					0.00E+00	0%
5	194	29	Subsurface	Beryllium	8.20E-01			5.75E-10		5.75E-10	0%
5	194	29	Subsurface	Chromium	5.76E+01			1.41E-06		1.41E-06	4%
5	194	29	Subsurface	Cobalt	1.41E+01			3.71E-08		3.71E-08	0%
5	194	29	Subsurface	Manganese	2.65E+03					0.00E+00	0%
5	194	29	Subsurface	Nickel	8.47E+01			6.43E-09		6.43E-09	0%
5	194	29	Subsurface	Silver	9.77E+00					0.00E+00	0%
5	194	29	Subsurface	Thallium	4.40E-01					0.00E+00	0%
5	194	29	Subsurface	Vanadium	4.12E+01					0.00E+00	0%
5	**194**	**29**	**Subsurface**	**Totals**		**2.66E-05**	**7.82E-06**	**1.47E-06**		**3.59E-05**	
5	**194**	**29**	**Subsurface**	**Percent**		**74%**	**22%**	**4%**			
5	194	30	Subsurface	Arsenic	9.44E+00	1.76E-05	5.16E-06	1.19E-08		2.28E-05	94%
5	194	30	Subsurface	Beryllium	3.16E+00			2.22E-09		2.22E-09	0%
5	194	30	Subsurface	Chromium	5.70E+01			1.40E-06		1.40E-06	6%
5	194	30	Subsurface	Manganese	6.15E+02					0.00E+00	0%

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Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	30	Subsurface	Mercury	8.80E+00					0.00E+00	0%
5	194	30	Subsurface	Nickel	6.99E+01			5.30E-09		5.30E-09	0%
5	194	30	Subsurface	Silver	1.04E+01					0.00E+00	0%
5	194	30	Subsurface	Vanadium	2.79E+01					0.00E+00	0%
5	**194**	**30**	**Subsurface**	**Totals**		**1.76E-05**	**5.16E-06**	**1.42E-06**		**2.42E-05**	
5	**194**	**30**	**Subsurface**	**Percent**		**73%**	**21%**	**6%**			
5	194	31	Subsurface	Cesium-137	5.70E-01	5.48E-08		1.01E-12	4.89E-06	4.95E-06	77%
5	194	31	Subsurface	Uranium-238	1.72E+00	8.02E-07		2.40E-09	6.63E-07	1.47E-06	23%
5	**194**	**31**	**Subsurface**	**Totals**		**8.57E-07**		**2.40E-09**	**5.55E-06**	**6.41E-06**	
5	**194**	**31**	**Subsurface**	**Percent**		**13%**		**0%**	**87%**		
5	196	1	Subsurface	Aluminum	1.79E+04					0.00E+00	0%
5	196	1	Subsurface	Antimony	1.21E+02					0.00E+00	0%
5	196	1	Subsurface	Arsenic	1.05E+01	1.95E-05	5.74E-06	1.32E-08		2.53E-05	82%
5	196	1	Subsurface	Barium	3.89E+02					0.00E+00	0%
5	196	1	Subsurface	Beryllium	1.13E+02			7.92E-08		7.92E-08	0%
5	196	1	Subsurface	Cadmium	1.16E+02			6.10E-08		6.10E-08	0%
5	196	1	Subsurface	Chromium	1.12E+02			2.75E-06		2.75E-06	9%
5	196	1	Subsurface	Cobalt	1.12E+02			2.94E-07		2.94E-07	1%
5	196	1	Subsurface	Iron	2.96E+04					0.00E+00	0%
5	196	1	Subsurface	Manganese	1.98E+03					0.00E+00	0%
5	196	1	Subsurface	Neptunium-237	3.11E-01	1.12E-07		8.21E-10	8.36E-07	9.49E-07	3%
5	196	1	Subsurface	Nickel	5.87E+02			4.46E-08		4.46E-08	0%
5	196	1	Subsurface	Silver	6.54E+01					0.00E+00	0%
5	196	1	Subsurface	Thallium	1.14E+02					0.00E+00	0%
5	196	1	Subsurface	Uranium	2.33E+01					0.00E+00	0%
5	196	1	Subsurface	Uranium-238	1.54E+00	7.18E-07		2.15E-09	5.93E-07	1.31E-06	4%
5	196	1	Subsurface	Vanadium	4.38E+01					0.00E+00	0%
5	196	1	Subsurface	Zinc	1.65E+03					0.00E+00	0%
5	**196**	**1**	**Subsurface**	**Totals**		**2.04E-05**	**5.74E-06**	**3.24E-06**	**1.43E-06**	**3.08E-05**	
5	**196**	**1**	**Subsurface**	**Percent**		**66%**	**19%**	**11%**	**5%**		
5	196	2	Subsurface	Aluminum	1.69E+04					0.00E+00	0%
5	196	2	Subsurface	Antimony	6.22E+01					0.00E+00	0%
5	196	2	Subsurface	Arsenic	9.40E+00	1.75E-05	5.14E-06	1.18E-08		2.27E-05	10%
5	196	2	Subsurface	Barium	2.02E+02					0.00E+00	0%
5	196	2	Subsurface	Cadmium	4.42E+00			2.32E-09		2.32E-09	0%
5	196	2	Subsurface	Nickel	8.01E+01			6.08E-09		6.08E-09	0%
5	196	2	Subsurface	PCB, Total	1.51E+00	3.75E-06	5.14E-06	4.25E-07		9.31E-06	4%
5	196	2	Subsurface	Selenium	6.29E+01					0.00E+00	0%
5	196	2	Subsurface	Total PAH	9.04E+00	8.19E-05	1.04E-04	1.73E-07		1.86E-04	85%
5	196	2	Subsurface	Uranium-238	2.21E+00	1.03E-06		3.08E-09	8.51E-07	1.88E-06	1%
5	**196**	**2**	**Subsurface**	**Totals**		**1.04E-04**	**1.15E-04**	**6.21E-07**	**8.51E-07**	**2.20E-04**	
5	**196**	**2**	**Subsurface**	**Percent**		**47%**	**52%**	**0%**	**0%**		
5	489	1	Subsurface	Arsenic	1.00E+01	1.86E-05	5.47E-06	1.26E-08		2.41E-05	89%
5	489	1	Subsurface	Cadmium	8.70E-01			4.57E-10		4.57E-10	0%
5	489	1	Subsurface	Nickel	7.88E+01			5.98E-09		5.98E-09	0%
5	489	1	Subsurface	Total PAH	8.22E-02	7.45E-07	9.48E-07	1.57E-09		1.69E-06	6%
5	489	1	Subsurface	Uranium-238	1.47E+00	6.85E-07		2.05E-09	5.66E-07	1.25E-06	5%
5	**489**	**1**	**Subsurface**	**Totals**		**2.00E-05**	**6.42E-06**	**2.27E-08**	**5.66E-07**	**2.71E-05**	
5	**489**	**1**	**Subsurface**	**Percent**		**74%**	**24%**	**0%**	**2%**		
5	531	1	Subsurface	Antimony	1.00E+00					0.00E+00	0%
5	531	1	Subsurface	Arsenic	4.68E+01	8.72E-05	2.56E-05	5.90E-08		1.13E-04	95%
5	531	1	Subsurface	Cadmium	3.10E+00			1.63E-09		1.63E-09	0%
5	531	1	Subsurface	Chromium	5.33E+01			1.31E-06		1.31E-06	1%
5	531	1	Subsurface	Iron	5.68E+04					0.00E+00	0%
5	531	1	Subsurface	Manganese	8.65E+02					0.00E+00	0%
5	531	1	Subsurface	Nickel	1.62E+02			1.23E-08		1.23E-08	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	531	1	Subsurface	Total PAH	5.34E-02	4.84E-07	6.16E-07	1.02E-09		1.10E-06	1%
5	531	1	Subsurface	Uranium	2.41E+01					0.00E+00	0%
5	531	1	Subsurface	Uranium-235	1.38E-01	4.99E-08		2.08E-10	2.53E-07	3.03E-07	0%
5	531	1	Subsurface	Uranium-238	3.48E+00	1.62E-06		4.85E-09	1.34E-06	2.97E-06	3%
5	531	1	Subsurface	Zinc	2.45E+03					0.00E+00	0%
5	**531**	**1**	**Subsurface**	**Totals**		**8.93E-05**	**2.62E-05**	**1.39E-06**	**1.59E-06**	**1.19E-04**	
5	**531**	**1**	**Subsurface**	**Percent**		**75%**	**22%**	**1%**	**1%**		
6	200	1	Subsurface	Antimony	3.82E-01					0.00E+00	0%
6	200	1	Subsurface	Arsenic	9.73E+00	1.81E-05	5.32E-06	1.23E-08		2.35E-05	49%
6	200	1	Subsurface	Cesium-137	4.68E-01	4.50E-08		8.31E-13	4.02E-06	4.06E-06	8%
6	200	1	Subsurface	Chromium	6.19E+01			1.52E-06		1.52E-06	3%
6	200	1	Subsurface	Manganese	4.60E+02					0.00E+00	0%
6	200	1	Subsurface	Mercury	6.93E+00					0.00E+00	0%
6	200	1	Subsurface	Nickel	1.26E+02			9.54E-09		9.54E-09	0%
6	200	1	Subsurface	PCB, Total	2.60E+00	6.45E-06	8.85E-06	7.31E-07		1.60E-05	33%
6	200	1	Subsurface	Silver	9.47E+00					0.00E+00	0%
6	200	1	Subsurface	Total PAH	1.89E-02	1.71E-07	2.18E-07	3.61E-10		3.90E-07	1%
6	200	1	Subsurface	Uranium	2.65E+01					0.00E+00	0%
6	200	1	Subsurface	Uranium-235	1.14E-01	4.13E-08		1.72E-10	2.09E-07	2.51E-07	1%
6	200	1	Subsurface	Uranium-238	2.79E+00	1.30E-06		3.90E-09	1.08E-06	2.38E-06	5%
6	**200**	**1**	**Subsurface**	**Totals**		**2.61E-05**	**1.44E-05**	**2.28E-06**	**5.30E-06**	**4.81E-05**	
6	**200**	**1**	**Subsurface**	**Percent**		**54%**	**30%**	**5%**	**11%**		
6	212	1	Subsurface	Antimony	1.40E+00					0.00E+00	0%
6	212	1	Subsurface	Arsenic	1.44E+01	2.68E-05	7.89E-06	1.82E-08		3.48E-05	19%
6	212	1	Subsurface	Barium	1.92E+02					0.00E+00	0%
6	212	1	Subsurface	Beryllium	8.90E-01			6.24E-10		6.24E-10	0%
6	212	1	Subsurface	Cesium-137	6.01E-01	5.78E-08		1.07E-12	5.16E-06	5.22E-06	3%
6	212	1	Subsurface	Chromium	6.66E+01			1.63E-06		1.63E-06	1%
6	212	1	Subsurface	Cobalt	1.76E+01			4.62E-08		4.62E-08	0%
6	212	1	Subsurface	Cobalt-60	8.76E-03	7.84E-10		4.68E-14	3.67E-07	3.68E-07	0%
6	212	1	Subsurface	Iron	4.14E+04					0.00E+00	0%
6	212	1	Subsurface	Manganese	1.44E+03					0.00E+00	0%
6	212	1	Subsurface	Mercury	6.94E+00					0.00E+00	0%
6	212	1	Subsurface	Neptunium-237	4.00E+00	1.44E-06		1.06E-08	1.08E-05	1.22E-05	7%
6	212	1	Subsurface	Nickel	8.69E+01			6.60E-09		6.60E-09	0%
6	212	1	Subsurface	PCB, Total	1.80E-01	4.47E-07	6.13E-07	5.06E-08		1.11E-06	1%
6	212	1	Subsurface	Plutonium-239/240	6.71E+00	4.11E-06		3.33E-08	4.53E-09	4.15E-06	2%
6	212	1	Subsurface	Silver	1.55E+01					0.00E+00	0%
6	212	1	Subsurface	Thorium-230	2.60E+02	1.17E-04		1.11E-06	7.20E-07	1.18E-04	65%
6	212	1	Subsurface	Uranium	2.30E+01					0.00E+00	0%
6	212	1	Subsurface	Uranium-235	2.09E-01	7.56E-08		3.15E-10	3.83E-07	4.59E-07	0%
6	212	1	Subsurface	Uranium-238	3.17E+00	1.48E-06		4.42E-09	1.22E-06	2.70E-06	1%
6	212	1	Subsurface	Vanadium	5.33E+01					0.00E+00	0%
6	**212**	**1**	**Subsurface**	**Totals**		**1.51E-04**	**8.50E-06**	**2.91E-06**	**1.86E-05**	**1.81E-04**	
6	**212**	**1**	**Subsurface**	**Percent**		**83%**	**5%**	**2%**	**10%**		
6	213	1	Subsurface	Antimony	8.50E-01					0.00E+00	0%
6	213	1	Subsurface	Arsenic	9.21E+00	1.71E-05	5.04E-06	1.16E-08		2.22E-05	75%
6	213	1	Subsurface	Chromium	5.47E+01			1.34E-06		1.34E-06	5%
6	213	1	Subsurface	Manganese	9.06E+02					0.00E+00	0%
6	213	1	Subsurface	Nickel	6.67E+01			5.07E-09		5.07E-09	0%
6	213	1	Subsurface	PCB, Total	7.30E-02	1.81E-07	2.48E-07	2.05E-08		4.50E-07	2%
6	213	1	Subsurface	Silver	1.32E+01					0.00E+00	0%
6	213	1	Subsurface	Total PAH	1.72E-01	1.56E-06	1.98E-06	3.29E-09		3.54E-06	12%
6	213	1	Subsurface	Uranium-238	2.33E+00	1.09E-06		3.25E-09	8.98E-07	1.99E-06	7%
6	**213**	**1**	**Subsurface**	**Totals**		**2.00E-05**	**7.27E-06**	**1.38E-06**	**8.98E-07**	**2.95E-05**	
6	**213**	**1**	**Subsurface**	**Percent**		**68%**	**25%**	**5%**	**3%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	213	2	Subsurface	Chromium	6.77E+01			1.66E-06		1.66E-06	100%
6	213	2	Subsurface	Manganese	2.10E+03					0.00E+00	0%
6	213	2	Subsurface	Nickel	9.10E+01			6.91E-09		6.91E-09	0%
6	213	2	Subsurface	Silver	1.13E+01					0.00E+00	0%
6	**213**	**2**	**Subsurface**	**Totals**				**1.67E-06**		**1.67E-06**	
6	**213**	**2**	**Subsurface**	**Percent**				**100%**			
6	214	1	Subsurface	Antimony	5.70E-01					0.00E+00	0%
6	214	1	Subsurface	Arsenic	1.15E+01	2.14E-05	6.30E-06	1.45E-08		2.78E-05	100%
6	**214**	**1**	**Subsurface**	**Totals**		**2.14E-05**	**6.30E-06**	**1.45E-08**		**2.78E-05**	
6	**214**	**1**	**Subsurface**	**Percent**		**77%**	**23%**	**0%**			
6	215	1	Subsurface	Antimony	6.80E-01					0.00E+00	0%
6	215	1	Subsurface	Arsenic	1.02E+01	1.89E-05	5.56E-06	1.28E-08		2.45E-05	68%
6	215	1	Subsurface	Chromium	5.73E+01			1.41E-06		1.41E-06	4%
6	215	1	Subsurface	Iron	3.87E+04					0.00E+00	0%
6	215	1	Subsurface	Nickel	7.32E+01			5.55E-09		5.55E-09	0%
6	215	1	Subsurface	Silver	9.51E+00					0.00E+00	0%
6	215	1	Subsurface	Total PAH	5.00E-01	4.53E-06	5.77E-06	9.56E-09		1.03E-05	28%
6	**215**	**1**	**Subsurface**	**Totals**		**2.34E-05**	**1.13E-05**	**1.43E-06**		**3.62E-05**	
6	**215**	**1**	**Subsurface**	**Percent**		**65%**	**31%**	**4%**			
6	216	1	Subsurface	Arsenic	8.60E+00	1.60E-05	4.70E-06	1.08E-08		2.07E-05	73%
6	216	1	Subsurface	Cesium-137	4.10E-01	3.94E-08		7.28E-13	3.52E-06	3.56E-06	12%
6	216	1	Subsurface	Total PAH	1.49E-01	1.35E-06	1.72E-06	2.86E-09		3.08E-06	11%
6	216	1	Subsurface	Uranium-238	1.33E+00	6.20E-07		1.86E-09	5.12E-07	1.13E-06	4%
6	**216**	**1**	**Subsurface**	**Totals**		**1.80E-05**	**6.43E-06**	**1.55E-08**	**4.03E-06**	**2.85E-05**	
6	**216**	**1**	**Subsurface**	**Percent**		**63%**	**23%**	**0%**	**14%**		
6	217	1	Subsurface	Arsenic	9.42E+00	1.75E-05	5.15E-06	1.19E-08		2.27E-05	90%
6	217	1	Subsurface	Chromium	6.53E+01			1.60E-06		1.60E-06	6%
6	217	1	Subsurface	Cobalt	1.64E+01			4.31E-08		4.31E-08	0%
6	217	1	Subsurface	Manganese	9.97E+02					0.00E+00	0%
6	217	1	Subsurface	Mercury	7.37E+00					0.00E+00	0%
6	217	1	Subsurface	Nickel	8.71E+01			6.61E-09		6.61E-09	0%
6	217	1	Subsurface	Silver	1.35E+01					0.00E+00	0%
6	217	1	Subsurface	Uranium-238	1.09E+00	5.10E-07		1.53E-09	4.21E-07	9.33E-07	4%
6	217	1	Subsurface	Vanadium	3.00E+01					0.00E+00	0%
6	**217**	**1**	**Subsurface**	**Totals**		**1.81E-05**	**5.15E-06**	**1.66E-06**	**4.21E-07**	**2.53E-05**	
6	**217**	**1**	**Subsurface**	**Percent**		**71%**	**20%**	**7%**	**2%**		
6	217	2	Subsurface	1,1-Dichloroethene	1.88E-02	1.40E-08	3.43E-08	2.49E-07		2.97E-07	1%
6	217	2	Subsurface	Aluminum	1.02E+04					0.00E+00	0%
6	217	2	Subsurface	Antimony	3.10E+00					0.00E+00	0%
6	217	2	Subsurface	Arsenic	9.97E+00	1.86E-05	5.45E-06	1.26E-08		2.40E-05	70%
6	217	2	Subsurface	Beryllium	5.85E-01			4.10E-10		4.10E-10	0%
6	217	2	Subsurface	Chromium	6.61E+01			1.62E-06		1.62E-06	5%
6	217	2	Subsurface	Cobalt	8.29E+01			2.18E-07		2.18E-07	1%
6	217	2	Subsurface	Iron	3.04E+04					0.00E+00	0%
6	217	2	Subsurface	Manganese	9.50E+02					0.00E+00	0%
6	217	2	Subsurface	Mercury	9.20E+00					0.00E+00	0%
6	217	2	Subsurface	Nickel	7.88E+01			5.98E-09		5.98E-09	0%
6	217	2	Subsurface	Silver	1.61E+01					0.00E+00	0%
6	217	2	Subsurface	Total PAH	4.06E-01	3.68E-06	4.68E-06	7.76E-09		8.37E-06	24%
6	217	2	Subsurface	Vanadium	2.87E+01					0.00E+00	0%
6	**217**	**2**	**Subsurface**	**Totals**		**2.23E-05**	**1.02E-05**	**2.11E-06**		**3.45E-05**	
6	**217**	**2**	**Subsurface**	**Percent**		**64%**	**29%**	**6%**			
6	221	1	Subsurface	Aluminum	2.36E+04					0.00E+00	0%
6	221	1	Subsurface	Antimony	5.78E-01					0.00E+00	0%
6	221	1	Subsurface	Arsenic	1.24E+01	2.30E-05	6.77E-06	1.56E-08		2.98E-05	52%
6	221	1	Subsurface	Barium	8.64E+02					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	221	1	Subsurface	Beryllium	1.55E+00			1.09E-09		1.09E-09	0%
6	221	1	Subsurface	Chromium	6.57E+01			1.61E-06		1.61E-06	3%
6	221	1	Subsurface	Cobalt	7.22E+01			1.90E-07		1.90E-07	0%
6	221	1	Subsurface	Iron	3.86E+04					0.00E+00	0%
6	221	1	Subsurface	Manganese	4.39E+03					0.00E+00	0%
6	221	1	Subsurface	Mercury	1.23E+01					0.00E+00	0%
6	221	1	Subsurface	Nickel	9.46E+01			7.18E-09		7.18E-09	0%
6	221	1	Subsurface	PCB, Total	5.00E-01	1.24E-06	1.70E-06	1.41E-07		3.08E-06	5%
6	221	1	Subsurface	Silver	9.74E+00					0.00E+00	0%
6	221	1	Subsurface	Thallium	1.24E+00					0.00E+00	0%
6	221	1	Subsurface	Total PAH	1.02E+00	9.27E-06	1.18E-05	1.96E-08		2.11E-05	37%
6	221	1	Subsurface	Uranium	1.46E+01					0.00E+00	0%
6	221	1	Subsurface	Uranium-238	1.93E+00	9.00E-07		2.69E-09	7.43E-07	1.65E-06	3%
6	221	1	Subsurface	Vanadium	5.36E+01					0.00E+00	0%
6	**221**	**1**	**Subsurface**	**Totals**		**3.44E-05**	**2.03E-05**	**1.99E-06**	**7.43E-07**	**5.74E-05**	
6	**221**	**1**	**Subsurface**	**Percent**		**60%**	**35%**	**3%**	**1%**		
6	222	1	Subsurface	Aluminum	1.11E+04					0.00E+00	0%
6	222	1	Subsurface	Arsenic	1.02E+01	1.90E-05	5.57E-06	1.28E-08		2.45E-05	44%
6	222	1	Subsurface	Cesium-137	2.99E-01	2.87E-08		5.31E-13	2.57E-06	2.59E-06	5%
6	222	1	Subsurface	Chromium	6.48E+01			1.59E-06		1.59E-06	3%
6	222	1	Subsurface	Cobalt-60	6.54E-03	5.85E-10		3.49E-14	2.74E-07	2.75E-07	0%
6	222	1	Subsurface	Manganese	6.33E+02					0.00E+00	0%
6	222	1	Subsurface	Nickel	9.19E+01			6.98E-09		6.98E-09	0%
6	222	1	Subsurface	PCB, Total	9.67E-01	2.40E-06	3.29E-06	2.72E-07		5.96E-06	11%
6	222	1	Subsurface	Total PAH	1.77E-01	1.61E-06	2.04E-06	3.39E-09		3.65E-06	7%
6	222	1	Subsurface	Uranium	2.77E+01					0.00E+00	0%
6	222	1	Subsurface	Uranium-234	7.04E+00	2.47E-06		1.20E-08	5.99E-09	2.49E-06	4%
6	222	1	Subsurface	Uranium-235	7.10E-01	2.57E-07		1.07E-09	1.30E-06	1.56E-06	3%
6	222	1	Subsurface	Uranium-238	1.54E+01	7.17E-06		2.15E-08	5.93E-06	1.31E-05	24%
6	**222**	**1**	**Subsurface**	**Totals**		**3.29E-05**	**1.09E-05**	**1.92E-06**	**1.01E-05**	**5.58E-05**	
6	**222**	**1**	**Subsurface**	**Percent**		**59%**	**20%**	**3%**	**18%**		
6	227	1	Subsurface	Arsenic	8.46E+00	1.57E-05	4.63E-06	1.07E-08		2.04E-05	20%
6	227	1	Subsurface	Beryllium	5.50E-01			3.85E-10		3.85E-10	0%
6	227	1	Subsurface	Cesium-137	1.67E-01	1.61E-08		2.96E-13	1.43E-06	1.45E-06	1%
6	227	1	Subsurface	Chromium	5.34E+01			1.31E-06		1.31E-06	1%
6	227	1	Subsurface	Cobalt-60	1.53E-02	1.37E-09		8.17E-14	6.41E-07	6.42E-07	1%
6	227	1	Subsurface	Neptunium-237	7.95E-01	2.86E-07		2.10E-09	2.14E-06	2.43E-06	2%
6	227	1	Subsurface	Nickel	1.99E+02			1.51E-08		1.51E-08	0%
6	227	1	Subsurface	PCB, Total	3.94E+00	9.77E-06	1.34E-05	1.11E-06		2.43E-05	24%
6	227	1	Subsurface	Technetium-99	4.18E+01	7.11E-07		8.79E-11	1.15E-08	7.22E-07	1%
6	227	1	Subsurface	Thallium	5.10E-01					0.00E+00	0%
6	227	1	Subsurface	Total PAH	3.38E-01	3.06E-06	3.90E-06	6.46E-09		6.96E-06	7%
6	227	1	Subsurface	Uranium	1.02E+02					0.00E+00	0%
6	227	1	Subsurface	Uranium-234	1.40E+01	4.91E-06		2.38E-08	1.19E-08	4.94E-06	5%
6	227	1	Subsurface	Uranium-235	1.35E+00	4.87E-07		2.03E-09	2.47E-06	2.96E-06	3%
6	227	1	Subsurface	Uranium-238	4.18E+01	1.95E-05		5.83E-08	1.61E-05	3.56E-05	35%
6	**227**	**1**	**Subsurface**	**Totals**		**5.45E-05**	**2.19E-05**	**2.54E-06**	**2.28E-05**	**1.02E-04**	
6	**227**	**1**	**Subsurface**	**Percent**		**54%**	**22%**	**2%**	**22%**		
6	227	2	Subsurface	Arsenic	8.34E+00	1.55E-05	4.56E-06	1.05E-08		2.01E-05	37%
6	227	2	Subsurface	Barium	1.35E+02					0.00E+00	0%
6	227	2	Subsurface	Beryllium	5.63E-01			3.95E-10		3.95E-10	0%
6	227	2	Subsurface	Chromium	4.55E+01			1.11E-06		1.11E-06	2%
6	227	2	Subsurface	Cobalt	1.06E+01			2.79E-08		2.79E-08	0%
6	227	2	Subsurface	Cobalt-60	1.37E-02	1.23E-09		7.32E-14	5.74E-07	5.75E-07	1%
6	227	2	Subsurface	Manganese	7.38E+02					0.00E+00	0%
6	227	2	Subsurface	Mercury	8.32E+00					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	227	2	Subsurface	Neptunium-237	3.83E-02	1.38E-08		1.01E-10	1.03E-07	1.17E-07	0%
6	227	2	Subsurface	Nickel	1.23E+02			9.34E-09		9.34E-09	0%
6	227	2	Subsurface	PCB, Total	4.75E+00	1.18E-05	1.62E-05	1.34E-06		2.93E-05	53%
6	227	2	Subsurface	Silver	8.52E+00					0.00E+00	0%
6	227	2	Subsurface	Total PAH	1.16E-01	1.05E-06	1.33E-06	2.21E-09		2.38E-06	4%
6	227	2	Subsurface	Uranium	1.51E+01					0.00E+00	0%
6	227	2	Subsurface	Uranium-238	1.57E+00	7.33E-07		2.19E-09	6.06E-07	1.34E-06	2%
6	227	2	Subsurface	Vanadium	2.46E+01					0.00E+00	0%
6	**227**	**2**	**Subsurface**	**Totals**		**2.91E-05**	**2.21E-05**	**2.50E-06**	**1.28E-06**	**5.50E-05**	
6	**227**	**2**	**Subsurface**	**Percent**		**53%**	**40%**	**5%**	**2%**		
6	228	1	Subsurface	Antimony	6.30E-01					0.00E+00	0%
6	228	1	Subsurface	Arsenic	2.79E+01	5.19E-05	1.53E-05	3.51E-08		6.72E-05	84%
6	228	1	Subsurface	Beryllium	7.50E-01			5.26E-10		5.26E-10	0%
6	228	1	Subsurface	Cadmium	3.90E+00			2.05E-09		2.05E-09	0%
6	228	1	Subsurface	Chromium	1.89E+02			4.63E-06		4.63E-06	6%
6	228	1	Subsurface	Cobalt-60	1.29E-02	1.15E-09		6.89E-14	5.41E-07	5.42E-07	1%
6	228	1	Subsurface	Iron	3.77E+04					0.00E+00	0%
6	228	1	Subsurface	Manganese	9.97E+02					0.00E+00	0%
6	228	1	Subsurface	Mercury	9.37E+00					0.00E+00	0%
6	228	1	Subsurface	Neptunium-237	8.00E-01	2.88E-07		2.11E-09	2.15E-06	2.44E-06	3%
6	228	1	Subsurface	Nickel	7.92E+01			6.01E-09		6.01E-09	0%
6	228	1	Subsurface	Silver	1.16E+01					0.00E+00	0%
6	228	1	Subsurface	Total PAH	6.69E-02	6.06E-07	7.71E-07	1.28E-09		1.38E-06	2%
6	228	1	Subsurface	Uranium	1.51E+01					0.00E+00	0%
6	228	1	Subsurface	Uranium-235	1.78E-01	6.44E-08		2.68E-10	3.27E-07	3.91E-07	0%
6	228	1	Subsurface	Uranium-238	3.77E+00	1.76E-06		5.26E-09	1.45E-06	3.22E-06	4%
6	**228**	**1**	**Subsurface**	**Totals**		**5.47E-05**	**1.60E-05**	**4.69E-06**	**4.47E-06**	**7.99E-05**	
6	**228**	**1**	**Subsurface**	**Percent**		**68%**	**20%**	**6%**	**6%**		
7	27	1	Subsurface	Cobalt-60	1.01E-02	9.04E-10		5.39E-14	4.23E-07	4.24E-07	49%
7	27	1	Subsurface	Nickel	3.97E+01			3.01E-09		3.01E-09	0%
7	27	1	Subsurface	PCB, Total	7.20E-02	1.79E-07	2.45E-07	2.03E-08		4.44E-07	51%
7	**27**	**1**	**Subsurface**	**Totals**		**1.80E-07**	**2.45E-07**	**2.33E-08**	**4.23E-07**	**8.71E-07**	
7	**27**	**1**	**Subsurface**	**Percent**		**21%**	**28%**	**3%**	**49%**		
7	76	1	Subsurface	Arsenic	1.31E+01	2.44E-05	7.16E-06	1.65E-08		3.16E-05	45%
7	76	1	Subsurface	Barium	2.69E+02					0.00E+00	0%
7	76	1	Subsurface	Mercury	7.45E+00					0.00E+00	0%
7	76	1	Subsurface	PCB, Total	2.60E-01	6.45E-07	8.85E-07	7.31E-08		1.60E-06	2%
7	76	1	Subsurface	Total PAH	1.76E+00	1.59E-05	2.03E-05	3.36E-08		3.62E-05	51%
7	76	1	Subsurface	Uranium-238	1.45E+00	6.76E-07		2.02E-09	5.59E-07	1.24E-06	2%
7	**76**	**1**	**Subsurface**	**Totals**		**4.16E-05**	**2.83E-05**	**1.25E-07**	**5.59E-07**	**7.07E-05**	
7	**76**	**1**	**Subsurface**	**Percent**		**59%**	**40%**	**0%**	**1%**		
7	165	1	Subsurface	Aluminum	8.41E+03					0.00E+00	0%
7	165	1	Subsurface	Antimony	2.20E+00					0.00E+00	0%
7	165	1	Subsurface	Arsenic	6.37E+01	1.19E-04	3.48E-05	8.02E-08		1.54E-04	41%
7	165	1	Subsurface	Barium	5.25E+02					0.00E+00	0%
7	165	1	Subsurface	Beryllium	8.14E-01			5.70E-10		5.70E-10	0%
7	165	1	Subsurface	Cesium-137	3.47E+00	3.34E-07		6.16E-12	2.98E-05	3.01E-05	8%
7	165	1	Subsurface	Chromium	3.61E+01			8.84E-07		8.84E-07	0%
7	165	1	Subsurface	Cobalt	8.44E+00			2.22E-08		2.22E-08	0%
7	165	1	Subsurface	Mercury	3.77E-01					0.00E+00	0%
7	165	1	Subsurface	Naphthalene	1.51E+00			4.98E-07		4.98E-07	0%
7	165	1	Subsurface	Neptunium-237	4.26E-01	1.53E-07		1.12E-09	1.15E-06	1.30E-06	0%
7	165	1	Subsurface	Nickel	3.36E+01			2.55E-09		2.55E-09	0%
7	165	1	Subsurface	PCB, Total	9.89E+00	2.46E-05	3.37E-05	2.78E-06		6.10E-05	16%
7	165	1	Subsurface	Pentachlorophenol	1.98E+00	9.82E-07	9.61E-07	2.94E-12		1.94E-06	1%
7	165	1	Subsurface	Plutonium-239/240	2.81E+00	1.72E-06		1.39E-08	1.90E-09	1.73E-06	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
7	165	1	Subsurface	Silver	3.09E+01					0.00E+00	0%
7	165	1	Subsurface	Thorium-230	6.02E+00	2.70E-06		2.56E-08	1.67E-08	2.74E-06	1%
7	165	1	Subsurface	Total PAH	1.87E+00	1.69E-05	2.15E-05	3.57E-08		3.85E-05	10%
7	165	1	Subsurface	Uranium	1.08E+02					0.00E+00	0%
7	165	1	Subsurface	Uranium-234	5.76E+01	2.02E-05		9.80E-08	4.91E-08	2.04E-05	5%
7	165	1	Subsurface	Uranium-235	2.06E+00	7.46E-07		3.11E-09	3.78E-06	4.53E-06	1%
7	165	1	Subsurface	Uranium-238	6.42E+01	2.99E-05		8.95E-08	2.47E-05	5.47E-05	15%
7	**165**	**1**	**Subsurface**	**Totals**		**2.17E-04**	**9.10E-05**	**4.54E-06**	**5.95E-05**	**3.72E-04**	
7	**165**	**1**	**Subsurface**	**Percent**		**58%**	**24%**	**1%**	**16%**		
7	170	1	Subsurface	Cesium-137	3.35E-01	3.22E-08		5.95E-13	2.88E-06	2.91E-06	50%
7	170	1	Subsurface	Cobalt-60	9.50E-03	8.50E-10		5.07E-14	3.98E-07	3.99E-07	7%
7	170	1	Subsurface	Neptunium-237	1.15E-01	4.14E-08		3.04E-10	3.09E-07	3.51E-07	6%
7	170	1	Subsurface	Uranium-238	2.55E+00	1.19E-06		3.56E-09	9.82E-07	2.17E-06	37%
7	**170**	**1**	**Subsurface**	**Totals**		**1.26E-06**		**3.86E-09**	**4.56E-06**	**5.83E-06**	
7	**170**	**1**	**Subsurface**	**Percent**		**22%**		**0%**	**78%**		
8	158	1	Subsurface	Antimony	4.90E-01					0.00E+00	0%
8	158	1	Subsurface	Arsenic	9.51E+00	1.77E-05	5.20E-06	1.20E-08		2.29E-05	62%
8	158	1	Subsurface	Barium	1.64E+02					0.00E+00	0%
8	158	1	Subsurface	Beryllium	5.69E-01			3.99E-10		3.99E-10	0%
8	158	1	Subsurface	Chromium	5.11E+01			1.25E-06		1.25E-06	3%
8	158	1	Subsurface	Cobalt	1.26E+01			3.30E-08		3.30E-08	0%
8	158	1	Subsurface	Manganese	1.04E+03					0.00E+00	0%
8	158	1	Subsurface	Mercury	1.05E+01					0.00E+00	0%
8	158	1	Subsurface	Neptunium-237	5.96E-02	2.14E-08		1.57E-10	1.60E-07	1.82E-07	0%
8	158	1	Subsurface	Nickel	8.12E+01			6.16E-09		6.16E-09	0%
8	158	1	Subsurface	Silver	1.01E+01					0.00E+00	0%
8	158	1	Subsurface	Thallium	3.69E-01					0.00E+00	0%
8	158	1	Subsurface	Total PAH	4.78E-01	4.33E-06	5.52E-06	9.15E-09		9.86E-06	26%
8	158	1	Subsurface	Uranium	2.03E+01					0.00E+00	0%
8	158	1	Subsurface	Uranium-235	1.40E-01	5.07E-08		2.11E-10	2.57E-07	3.08E-07	1%
8	158	1	Subsurface	Uranium-238	3.16E+00	1.47E-06		4.41E-09	1.22E-06	2.69E-06	7%
8	**158**	**1**	**Subsurface**	**Totals**		**2.36E-05**	**1.07E-05**	**1.32E-06**	**1.63E-06**	**3.73E-05**	
8	**158**	**1**	**Subsurface**	**Percent**		**63%**	**29%**	**4%**	**4%**		
8	169	1	Subsurface	Aluminum	2.06E+04					0.00E+00	0%
8	169	1	Subsurface	Antimony	1.30E+00					0.00E+00	0%
8	169	1	Subsurface	Arsenic	2.03E+01	3.78E-05	1.11E-05	2.56E-08		4.89E-05	22%
8	169	1	Subsurface	Barium	2.81E+02					0.00E+00	0%
8	169	1	Subsurface	Beryllium	2.30E+00			1.61E-09		1.61E-09	0%
8	169	1	Subsurface	Chromium	2.15E+02			5.27E-06		5.27E-06	2%
8	169	1	Subsurface	Cobalt	7.80E+01			2.05E-07		2.05E-07	0%
8	169	1	Subsurface	Cobalt-60	7.40E-03	6.62E-10		3.95E-14	3.10E-07	3.11E-07	0%
8	169	1	Subsurface	Copper	4.28E+02					0.00E+00	0%
8	169	1	Subsurface	Iron	4.16E+04					0.00E+00	0%
8	169	1	Subsurface	Manganese	1.58E+03					0.00E+00	0%
8	169	1	Subsurface	Mercury	7.87E+00					0.00E+00	0%
8	169	1	Subsurface	Nickel	8.04E+02			6.10E-08		6.10E-08	0%
8	169	1	Subsurface	PCB, Total	1.00E+01	2.48E-05	3.40E-05	2.81E-06		6.17E-05	28%
8	169	1	Subsurface	Thallium	4.60E-01					0.00E+00	0%
8	169	1	Subsurface	Total PAH	4.59E+00	4.16E-05	5.29E-05	8.77E-08		9.45E-05	43%
8	169	1	Subsurface	Uranium	5.03E+01					0.00E+00	0%
8	169	1	Subsurface	Uranium-234	6.55E+00	2.30E-06		1.11E-08	5.58E-09	2.31E-06	1%
8	169	1	Subsurface	Uranium-235	4.60E-01	1.66E-07		6.93E-10	8.44E-07	1.01E-06	0%
8	169	1	Subsurface	Uranium-238	8.12E+00	3.79E-06		1.13E-08	3.13E-06	6.92E-06	3%
8	169	1	Subsurface	Vanadium	4.49E+01					0.00E+00	0%
8	**169**	**1**	**Subsurface**	**Totals**		**1.10E-04**	**9.80E-05**	**8.49E-06**	**4.29E-06**	**2.21E-04**	
8	**169**	**1**	**Subsurface**	**Percent**		**50%**	**44%**	**4%**	**2%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	19	1	Subsurface	Arsenic	1.01E+01	1.88E-05	5.52E-06	1.27E-08		2.43E-05	14%
9	19	1	Subsurface	Beryllium	1.40E+00			9.81E-10		9.81E-10	0%
9	19	1	Subsurface	Cadmium	5.70E+00			3.00E-09		3.00E-09	0%
9	19	1	Subsurface	Cobalt	1.35E+01			3.55E-08		3.55E-08	0%
9	19	1	Subsurface	Copper	1.80E+03					0.00E+00	0%
9	19	1	Subsurface	Nickel	4.38E+02			3.32E-08		3.32E-08	0%
9	19	1	Subsurface	Thallium	9.80E-01					0.00E+00	0%
9	19	1	Subsurface	Total PAH	5.23E+00	4.74E-05	6.03E-05	9.99E-08		1.08E-04	63%
9	19	1	Subsurface	Uranium	1.64E+02					0.00E+00	0%
9	19	1	Subsurface	Uranium-234	2.77E+01	9.72E-06		4.71E-08	2.36E-08	9.79E-06	6%
9	19	1	Subsurface	Uranium-235	1.30E+00	4.70E-07		1.96E-09	2.39E-06	2.86E-06	2%
9	19	1	Subsurface	Uranium-238	3.06E+01	1.43E-05		4.27E-08	1.18E-05	2.61E-05	15%
9	19	1	Subsurface	Vanadium	3.83E+01					0.00E+00	0%
9	**19**	**1**	**Subsurface**	**Totals**		**9.06E-05**	**6.58E-05**	**2.77E-07**	**1.42E-05**	**1.71E-04**	
9	**19**	**1**	**Subsurface**	**Percent**		**53%**	**39%**	**0%**	**8%**		
9	138	1	Subsurface	Aluminum	1.08E+04					0.00E+00	0%
9	138	1	Subsurface	Antimony	4.55E+00					0.00E+00	0%
9	138	1	Subsurface	Arsenic	1.08E+01	2.01E-05	5.89E-06	1.36E-08		2.60E-05	80%
9	138	1	Subsurface	Barium	1.99E+02					0.00E+00	0%
9	138	1	Subsurface	Beryllium	6.28E-01			4.40E-10		4.40E-10	0%
9	138	1	Subsurface	Cadmium	4.87E+00			2.56E-09		2.56E-09	0%
9	138	1	Subsurface	Chromium	5.65E+01			1.39E-06		1.39E-06	4%
9	138	1	Subsurface	Cobalt	9.18E+00			2.41E-08		2.41E-08	0%
9	138	1	Subsurface	Iron	1.99E+04					0.00E+00	0%
9	138	1	Subsurface	Manganese	6.55E+02					0.00E+00	0%
9	138	1	Subsurface	Mercury	1.46E+01					0.00E+00	0%
9	138	1	Subsurface	Nickel	7.71E+01			5.85E-09		5.85E-09	0%
9	138	1	Subsurface	PCB, Total	5.00E-01	1.24E-06	1.70E-06	1.41E-07		3.08E-06	9%
9	138	1	Subsurface	Silver	1.01E+01					0.00E+00	0%
9	138	1	Subsurface	Thallium	6.20E-01					0.00E+00	0%
9	138	1	Subsurface	Total PAH	9.74E-02	8.83E-07	1.12E-06	1.86E-09		2.01E-06	6%
9	138	1	Subsurface	Vanadium	2.99E+01					0.00E+00	0%
9	**138**	**1**	**Subsurface**	**Totals**		**2.22E-05**	**8.72E-06**	**1.58E-06**		**3.25E-05**	
9	**138**	**1**	**Subsurface**	**Percent**		**68%**	**27%**	**5%**			
9	138	2	Subsurface	Arsenic	1.03E+01	1.92E-05	5.65E-06	1.30E-08		2.49E-05	90%
9	138	2	Subsurface	Cadmium	5.00E-01			2.63E-10		2.63E-10	0%
9	138	2	Subsurface	Chromium	6.28E+01			1.54E-06		1.54E-06	6%
9	138	2	Subsurface	Mercury	8.30E+00					0.00E+00	0%
9	138	2	Subsurface	Nickel	9.60E+01			7.29E-09		7.29E-09	0%
9	138	2	Subsurface	PCB, Total	9.20E-02	2.28E-07	3.13E-07	2.59E-08		5.67E-07	2%
9	138	2	Subsurface	Silver	1.53E+01					0.00E+00	0%
9	138	2	Subsurface	Thallium	2.90E-01					0.00E+00	0%
9	138	2	Subsurface	Total PAH	3.84E-02	3.48E-07	4.43E-07	7.34E-10		7.92E-07	3%
9	**138**	**2**	**Subsurface**	**Totals**		**1.98E-05**	**6.41E-06**	**1.59E-06**		**2.78E-05**	
9	**138**	**2**	**Subsurface**	**Percent**		**71%**	**23%**	**6%**			
9	180	1	Subsurface	Antimony	5.97E-01					0.00E+00	0%
9	180	1	Subsurface	Arsenic	7.57E+01	1.41E-04	4.14E-05	9.54E-08		1.82E-04	99%
9	180	1	Subsurface	Beryllium	6.25E-01			4.38E-10		4.38E-10	0%
9	180	1	Subsurface	Chromium	6.34E+01			1.56E-06		1.56E-06	1%
9	180	1	Subsurface	Cobalt	1.37E+01			3.61E-08		3.61E-08	0%
9	180	1	Subsurface	Manganese	8.24E+02					0.00E+00	0%
9	180	1	Subsurface	Mercury	8.28E+00					0.00E+00	0%
9	180	1	Subsurface	Nickel	9.03E+01			6.86E-09		6.86E-09	0%
9	180	1	Subsurface	Silver	1.17E+01					0.00E+00	0%
9	180	1	Subsurface	Thallium	4.73E-01					0.00E+00	0%
9	**180**	**1**	**Subsurface**	**Totals**		**1.41E-04**	**4.14E-05**	**1.69E-06**		**1.84E-04**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**180**	**1**	**Subsurface**	**Percent**		**77%**	**22%**	**1%**			
9	180	2	Subsurface	Antimony	4.58E-01					0.00E+00	0%
9	180	2	Subsurface	Arsenic	1.17E+01	2.17E-05	6.39E-06	1.47E-08		2.81E-05	89%
9	180	2	Subsurface	Chromium	6.02E+01			1.48E-06		1.48E-06	5%
9	180	2	Subsurface	Manganese	6.72E+02					0.00E+00	0%
9	180	2	Subsurface	Mercury	8.25E+00					0.00E+00	0%
9	180	2	Subsurface	Nickel	8.64E+01			6.56E-09		6.56E-09	0%
9	180	2	Subsurface	Total PAH	9.19E-02	8.32E-07	1.06E-06	1.76E-09		1.89E-06	6%
9	**180**	**2**	**Subsurface**	**Totals**		**2.26E-05**	**7.45E-06**	**1.50E-06**		**3.15E-05**	
9	**180**	**2**	**Subsurface**	**Percent**		**72%**	**24%**	**5%**			
9	180	3	Subsurface	Arsenic	1.36E+01	2.53E-05	7.44E-06	1.71E-08		3.28E-05	96%
9	180	3	Subsurface	Beryllium	5.03E-01			3.52E-10		3.52E-10	0%
9	180	3	Subsurface	Chromium	5.44E+01			1.33E-06		1.33E-06	4%
9	180	3	Subsurface	Manganese	5.12E+02					0.00E+00	0%
9	180	3	Subsurface	Nickel	7.17E+01			5.44E-09		5.44E-09	0%
9	180	3	Subsurface	Silver	1.14E+01					0.00E+00	0%
9	180	3	Subsurface	Vanadium	2.87E+01					0.00E+00	0%
9	**180**	**3**	**Subsurface**	**Totals**		**2.53E-05**	**7.44E-06**	**1.36E-06**		**3.41E-05**	
9	**180**	**3**	**Subsurface**	**Percent**		**74%**	**22%**	**4%**			
9	180	4	Subsurface	Arsenic	1.11E+01	2.06E-05	6.05E-06	1.39E-08		2.67E-05	94%
9	180	4	Subsurface	Barium	1.63E+02					0.00E+00	0%
9	180	4	Subsurface	Beryllium	1.14E+00			7.99E-10		7.99E-10	0%
9	180	4	Subsurface	Chromium	6.00E+01			1.47E-06		1.47E-06	5%
9	180	4	Subsurface	Cobalt	9.68E+00			2.54E-08		2.54E-08	0%
9	180	4	Subsurface	Iron	1.61E+04					0.00E+00	0%
9	180	4	Subsurface	Manganese	8.05E+02					0.00E+00	0%
9	180	4	Subsurface	Mercury	6.89E+00					0.00E+00	0%
9	180	4	Subsurface	Nickel	6.99E+01			5.30E-09		5.30E-09	0%
9	180	4	Subsurface	Silver	1.16E+01					0.00E+00	0%
9	180	4	Subsurface	Total PAH	1.58E-02	1.43E-07	1.82E-07	3.02E-10		3.26E-07	1%
9	180	4	Subsurface	Vanadium	3.50E+01					0.00E+00	0%
9	**180**	**4**	**Subsurface**	**Totals**		**2.08E-05**	**6.24E-06**	**1.52E-06**		**2.85E-05**	
9	**180**	**4**	**Subsurface**	**Percent**		**73%**	**22%**	**5%**			
9	181	1	Subsurface	Chromium	3.44E+01			8.43E-07		8.43E-07	39%
9	181	1	Subsurface	PCB, Total	1.03E-01	2.56E-07	3.51E-07	2.90E-08		6.35E-07	29%
9	181	1	Subsurface	Thallium	3.50E+00					0.00E+00	0%
9	181	1	Subsurface	Total PAH	3.43E-02	3.11E-07	3.96E-07	6.56E-10		7.07E-07	32%
9	**181**	**1**	**Subsurface**	**Totals**		**5.67E-07**	**7.46E-07**	**8.73E-07**		**2.19E-06**	
9	**181**	**1**	**Subsurface**	**Percent**		**26%**	**34%**	**40%**			
9	195	1	Subsurface	Arsenic	1.17E+01	2.18E-05	6.42E-06	1.48E-08		2.83E-05	85%
9	195	1	Subsurface	Cesium-137	3.70E-01	3.56E-08		6.57E-13	3.18E-06	3.21E-06	10%
9	195	1	Subsurface	Chromium	5.85E+01			1.44E-06		1.44E-06	4%
9	195	1	Subsurface	Nickel	8.00E+01			6.07E-09		6.07E-09	0%
9	195	1	Subsurface	Silver	9.37E+00					0.00E+00	0%
9	195	1	Subsurface	Thallium	2.99E-01					0.00E+00	0%
9	195	1	Subsurface	Total PAH	1.53E-02	1.39E-07	1.76E-07	2.93E-10		3.15E-07	1%
9	**195**	**1**	**Subsurface**	**Totals**		**2.20E-05**	**6.59E-06**	**1.46E-06**	**3.18E-06**	**3.32E-05**	
9	**195**	**1**	**Subsurface**	**Percent**		**66%**	**20%**	**4%**	**10%**		
9	195	2	Subsurface	Chromium	5.63E+01			1.38E-06		1.38E-06	78%
9	195	2	Subsurface	Silver	9.48E+00					0.00E+00	0%
9	195	2	Subsurface	Total PAH	1.93E-02	1.75E-07	2.23E-07	3.69E-10		3.98E-07	22%
9	**195**	**2**	**Subsurface**	**Totals**		**1.75E-07**	**2.23E-07**	**1.38E-06**		**1.78E-06**	
9	**195**	**2**	**Subsurface**	**Percent**		**10%**	**13%**	**78%**			
9	195	3	Subsurface	Arsenic	1.09E+01	2.02E-05	5.93E-06	1.37E-08		2.61E-05	93%
9	195	3	Subsurface	Chromium	5.29E+01			1.30E-06		1.30E-06	5%
9	195	3	Subsurface	Manganese	4.88E+02					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	195	3	Subsurface	Nickel	9.63E+01			7.31E-09		7.31E-09	0%
9	195	3	Subsurface	Total PAH	3.31E-02	3.00E-07	3.82E-07	6.33E-10		6.82E-07	2%
9	**195**	**3**	**Subsurface**	**Totals**		**2.05E-05**	**6.32E-06**	**1.32E-06**		**2.81E-05**	
9	**195**	**3**	**Subsurface**	**Percent**		**73%**	**22%**	**5%**			
9	195	4	Subsurface	Arsenic	1.01E+01	1.88E-05	5.51E-06	1.27E-08		2.43E-05	95%
9	195	4	Subsurface	Chromium	5.08E+01			1.24E-06		1.24E-06	5%
9	195	4	Subsurface	Nickel	8.37E+01			6.35E-09		6.35E-09	0%
9	195	4	Subsurface	Silver	8.80E+00					0.00E+00	0%
9	195	4	Subsurface	Thallium	3.39E-01					0.00E+00	0%
9	**195**	**4**	**Subsurface**	**Totals**		**1.88E-05**	**5.51E-06**	**1.26E-06**		**2.55E-05**	
9	**195**	**4**	**Subsurface**	**Percent**		**73%**	**22%**	**5%**			
9	195	5	Subsurface	Arsenic	8.80E+00	1.64E-05	4.81E-06	1.11E-08		2.12E-05	81%
9	195	5	Subsurface	Cesium-137	3.41E-01	3.28E-08		6.05E-13	2.93E-06	2.96E-06	11%
9	195	5	Subsurface	Chromium	5.74E+01			1.41E-06		1.41E-06	5%
9	195	5	Subsurface	Nickel	8.11E+01			6.16E-09		6.16E-09	0%
9	195	5	Subsurface	Silver	8.41E+00					0.00E+00	0%
9	195	5	Subsurface	Thallium	5.50E-01					0.00E+00	0%
9	195	5	Subsurface	Total PAH	2.40E-02	2.17E-07	2.77E-07	4.59E-10		4.95E-07	2%
9	**195**	**5**	**Subsurface**	**Totals**		**1.66E-05**	**5.09E-06**	**1.43E-06**	**2.93E-06**	**2.61E-05**	
9	**195**	**5**	**Subsurface**	**Percent**		**64%**	**20%**	**5%**	**11%**		
9	195	6	Subsurface	Arsenic	1.05E+01	1.95E-05	5.74E-06	1.32E-08		2.53E-05	78%
9	195	6	Subsurface	Cesium-137	2.26E-01	2.17E-08		4.01E-13	1.94E-06	1.96E-06	6%
9	195	6	Subsurface	Chromium	5.52E+01			1.35E-06		1.35E-06	4%
9	195	6	Subsurface	Nickel	9.81E+01			7.45E-09		7.45E-09	0%
9	195	6	Subsurface	Silver	1.00E+01					0.00E+00	0%
9	195	6	Subsurface	Total PAH	1.91E-01	1.73E-06	2.20E-06	3.65E-09		3.94E-06	12%
9	**195**	**6**	**Subsurface**	**Totals**		**2.13E-05**	**7.94E-06**	**1.38E-06**	**1.94E-06**	**3.25E-05**	
9	**195**	**6**	**Subsurface**	**Percent**		**65%**	**24%**	**4%**	**6%**		
9	195	7	Subsurface	Arsenic	8.49E+00	1.58E-05	4.64E-06	1.07E-08		2.05E-05	94%
9	195	7	Subsurface	Chromium	4.74E+01			1.16E-06		1.16E-06	5%
9	195	7	Subsurface	Cobalt	1.13E+01			2.98E-08		2.98E-08	0%
9	195	7	Subsurface	Silver	8.06E+00					0.00E+00	0%
9	**195**	**7**	**Subsurface**	**Totals**		**1.58E-05**	**4.64E-06**	**1.20E-06**		**2.17E-05**	
9	**195**	**7**	**Subsurface**	**Percent**		**73%**	**21%**	**6%**			
9	195	8	Subsurface	Arsenic	1.12E+01	2.08E-05	6.10E-06	1.40E-08		2.69E-05	81%
9	195	8	Subsurface	Beryllium	6.78E-01			4.75E-10		4.75E-10	0%
9	195	8	Subsurface	Cesium-137	2.44E-01	2.35E-08		4.33E-13	2.09E-06	2.12E-06	6%
9	195	8	Subsurface	Chromium	5.23E+01			1.28E-06		1.28E-06	4%
9	195	8	Subsurface	Cobalt	1.41E+01			3.70E-08		3.70E-08	0%
9	195	8	Subsurface	Manganese	6.90E+02					0.00E+00	0%
9	195	8	Subsurface	Nickel	8.93E+01			6.78E-09		6.78E-09	0%
9	195	8	Subsurface	Silver	8.51E+00					0.00E+00	0%
9	195	8	Subsurface	Total PAH	1.42E-01	1.29E-06	1.64E-06	2.72E-09		2.93E-06	9%
9	195	8	Subsurface	Vanadium	3.70E+01					0.00E+00	0%
9	**195**	**8**	**Subsurface**	**Totals**		**2.21E-05**	**7.74E-06**	**1.34E-06**	**2.09E-06**	**3.32E-05**	
9	**195**	**8**	**Subsurface**	**Percent**		**66%**	**23%**	**4%**	**6%**		
9	195	9	Subsurface	Arsenic	1.03E+01	1.92E-05	5.65E-06	1.30E-08		2.49E-05	94%
9	195	9	Subsurface	Chromium	6.08E+01			1.49E-06		1.49E-06	6%
9	195	9	Subsurface	Nickel	9.12E+01			6.92E-09		6.92E-09	0%
9	195	9	Subsurface	Silver	9.33E+00					0.00E+00	0%
9	**195**	**9**	**Subsurface**	**Totals**		**1.92E-05**	**5.65E-06**	**1.51E-06**		**2.64E-05**	
9	**195**	**9**	**Subsurface**	**Percent**		**73%**	**21%**	**6%**			
9	195	10	Subsurface	Arsenic	9.83E+00	1.83E-05	5.38E-06	1.24E-08		2.37E-05	96%
9	195	10	Subsurface	Chromium	4.29E+01			1.05E-06		1.05E-06	4%
9	195	10	Subsurface	Manganese	3.79E+02					0.00E+00	0%
9	195	10	Subsurface	Nickel	7.98E+01			6.06E-09		6.06E-09	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	195	10	Subsurface	Silver	1.31E+01					0.00E+00	0%
9	**195**	**10**	**Subsurface**	**Totals**		**1.83E-05**	**5.38E-06**	**1.07E-06**		**2.47E-05**	
9	**195**	**10**	**Subsurface**	**Percent**		**74%**	**22%**	**4%**			
9	195	11	Subsurface	Aluminum	1.93E+04					0.00E+00	0%
9	195	11	Subsurface	Arsenic	1.30E+01	2.41E-05	7.08E-06	1.63E-08		3.12E-05	89%
9	195	11	Subsurface	Barium	3.18E+02					0.00E+00	0%
9	195	11	Subsurface	Cesium-137	2.13E-01	2.05E-08		3.78E-13	1.83E-06	1.85E-06	5%
9	195	11	Subsurface	Chromium	5.67E+01			1.39E-06		1.39E-06	4%
9	195	11	Subsurface	Cobalt	1.87E+01			4.90E-08		4.90E-08	0%
9	195	11	Subsurface	Iron	2.10E+04					0.00E+00	0%
9	195	11	Subsurface	Manganese	5.25E+02					0.00E+00	0%
9	195	11	Subsurface	Nickel	8.37E+01			6.35E-09		6.35E-09	0%
9	195	11	Subsurface	Silver	8.26E+00					0.00E+00	0%
9	195	11	Subsurface	Thallium	4.46E-01					0.00E+00	0%
9	195	11	Subsurface	Total PAH	2.83E-02	2.56E-07	3.26E-07	5.41E-10		5.83E-07	2%
9	195	11	Subsurface	Vanadium	5.55E+01					0.00E+00	0%
9	**195**	**11**	**Subsurface**	**Totals**		**2.44E-05**	**7.41E-06**	**1.46E-06**	**1.83E-06**	**3.51E-05**	
9	**195**	**11**	**Subsurface**	**Percent**		**70%**	**21%**	**4%**	**5%**		
9	195	12	Subsurface	Arsenic	1.08E+01	2.00E-05	5.88E-06	1.35E-08		2.59E-05	94%
9	195	12	Subsurface	Beryllium	6.22E-01			4.36E-10		4.36E-10	0%
9	195	12	Subsurface	Chromium	6.45E+01			1.58E-06		1.58E-06	6%
9	195	12	Subsurface	Manganese	4.77E+02					0.00E+00	0%
9	195	12	Subsurface	Nickel	9.19E+01			6.98E-09		6.98E-09	0%
9	195	12	Subsurface	Vanadium	3.68E+01					0.00E+00	0%
9	**195**	**12**	**Subsurface**	**Totals**		**2.00E-05**	**5.88E-06**	**1.60E-06**		**2.75E-05**	
9	**195**	**12**	**Subsurface**	**Percent**		**73%**	**21%**	**6%**			
9	195	13	Subsurface	Arsenic	9.12E+00	1.70E-05	4.99E-06	1.15E-08		2.20E-05	94%
9	195	13	Subsurface	Chromium	5.23E+01			1.28E-06		1.28E-06	6%
9	195	13	Subsurface	Nickel	8.34E+01			6.33E-09		6.33E-09	0%
9	195	13	Subsurface	Silver	8.71E+00					0.00E+00	0%
9	**195**	**13**	**Subsurface**	**Totals**		**1.70E-05**	**4.99E-06**	**1.30E-06**		**2.33E-05**	
9	**195**	**13**	**Subsurface**	**Percent**		**73%**	**21%**	**6%**			
9	195	14	Subsurface	Arsenic	1.02E+01	1.90E-05	5.59E-06	1.29E-08		2.46E-05	94%
9	195	14	Subsurface	Chromium	5.94E+01			1.46E-06		1.46E-06	6%
9	195	14	Subsurface	Mercury	6.49E+00					0.00E+00	0%
9	195	14	Subsurface	Nickel	8.22E+01			6.24E-09		6.24E-09	0%
9	195	14	Subsurface	Silver	8.87E+00					0.00E+00	0%
9	**195**	**14**	**Subsurface**	**Totals**		**1.90E-05**	**5.59E-06**	**1.48E-06**		**2.61E-05**	
9	**195**	**14**	**Subsurface**	**Percent**		**73%**	**21%**	**6%**			
9	195	15	Subsurface	Arsenic	9.15E+00	1.70E-05	5.00E-06	1.15E-08		2.21E-05	86%
9	195	15	Subsurface	Cesium-137	2.61E-01	2.51E-08		4.63E-13	2.24E-06	2.27E-06	9%
9	195	15	Subsurface	Chromium	5.34E+01			1.31E-06		1.31E-06	5%
9	**195**	**15**	**Subsurface**	**Totals**		**1.71E-05**	**5.00E-06**	**1.32E-06**	**2.24E-06**	**2.56E-05**	
9	**195**	**15**	**Subsurface**	**Percent**		**67%**	**20%**	**5%**	**9%**		
9	195	16	Subsurface	Cesium-137	2.94E-01	2.83E-08		5.22E-13	2.52E-06	2.55E-06	66%
9	195	16	Subsurface	Chromium	5.22E+01			1.28E-06		1.28E-06	33%
9	195	16	Subsurface	Manganese	3.87E+02					0.00E+00	0%
9	195	16	Subsurface	Mercury	8.43E+00					0.00E+00	0%
9	195	16	Subsurface	Nickel	8.59E+01			6.52E-09		6.52E-09	0%
9	**195**	**16**	**Subsurface**	**Totals**		**2.83E-08**		**1.29E-06**	**2.52E-06**	**3.84E-06**	
9	**195**	**16**	**Subsurface**	**Percent**		**1%**		**34%**	**66%**		
9	195	17	Subsurface	Arsenic	9.36E+00	1.74E-05	5.12E-06	1.18E-08		2.26E-05	65%
9	195	17	Subsurface	Chromium	6.77E+01			1.66E-06		1.66E-06	5%
9	195	17	Subsurface	Manganese	5.02E+02					0.00E+00	0%
9	195	17	Subsurface	Mercury	7.24E+00					0.00E+00	0%
9	195	17	Subsurface	Nickel	7.09E+01			5.38E-09		5.38E-09	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	195	17	Subsurface	PCB, Total	7.40E-01	1.84E-06	2.52E-06	2.08E-07		4.56E-06	13%
9	195	17	Subsurface	Silver	1.20E+01					0.00E+00	0%
9	195	17	Subsurface	Thallium	4.82E-01					0.00E+00	0%
9	195	17	Subsurface	Total PAH	2.05E-01	1.86E-06	2.36E-06	3.92E-09		4.23E-06	12%
9	195	17	Subsurface	Uranium-235	9.72E-02	3.52E-08		1.46E-10	1.78E-07	2.14E-07	1%
9	195	17	Subsurface	Uranium-238	1.75E+00	8.17E-07		2.45E-09	6.75E-07	1.49E-06	4%
9	**195**	**17**	**Subsurface**	**Totals**		**2.20E-05**	**1.00E-05**	**1.89E-06**	**8.54E-07**	**3.47E-05**	
9	**195**	**17**	**Subsurface**	**Percent**		**63%**	**29%**	**5%**	**2%**		
9	486	1	Subsurface	Cesium-137	1.71E+00	1.64E-07		3.04E-12	1.47E-05	1.48E-05	100%
9	**486**	**1**	**Subsurface**	**Totals**		**1.64E-07**		**3.04E-12**	**1.47E-05**	**1.48E-05**	
9	**486**	**1**	**Subsurface**	**Percent**		**1%**		**0%**	**99%**		
9	487	1	Subsurface	Cesium-137	1.38E+00	1.33E-07		2.45E-12	1.18E-05	1.20E-05	100%
9	**487**	**1**	**Subsurface**	**Totals**		**1.33E-07**		**2.45E-12**	**1.18E-05**	**1.20E-05**	
9	**487**	**1**	**Subsurface**	**Percent**		**1%**		**0%**	**99%**		
9	492	1	Subsurface	Arsenic	1.47E+01	2.74E-05	8.04E-06	1.85E-08		3.54E-05	5%
9	492	1	Subsurface	Beryllium	1.04E+01			7.29E-09		7.29E-09	0%
9	492	1	Subsurface	Cadmium	3.14E+00			1.65E-09		1.65E-09	0%
9	492	1	Subsurface	Cesium-137	3.46E-01	3.33E-08		6.14E-13	2.97E-06	3.00E-06	0%
9	492	1	Subsurface	Chromium	1.04E+03			2.55E-05		2.55E-05	4%
9	492	1	Subsurface	Cobalt-60	9.63E-03	8.62E-10		5.14E-14	4.03E-07	4.04E-07	0%
9	492	1	Subsurface	Neptunium-237	2.09E-01	7.52E-08		5.52E-10	5.62E-07	6.38E-07	0%
9	492	1	Subsurface	PCB, Total	4.41E+01	1.09E-04	1.50E-04	1.24E-05		2.72E-04	39%
9	492	1	Subsurface	Uranium	1.77E+03					0.00E+00	0%
9	492	1	Subsurface	Uranium-234	5.39E+01	1.89E-05		9.17E-08	4.59E-08	1.90E-05	3%
9	492	1	Subsurface	Uranium-235	5.72E+00	2.07E-06		8.62E-09	1.05E-05	1.26E-05	2%
9	492	1	Subsurface	Uranium-238	3.83E+02	1.79E-04		5.34E-07	1.48E-04	3.27E-04	47%
9	492	1	Subsurface	Vanadium	4.32E+01					0.00E+00	0%
9	**492**	**1**	**Subsurface**	**Totals**		**3.36E-04**	**1.58E-04**	**3.86E-05**	**1.62E-04**	**6.95E-04**	
9	**492**	**1**	**Subsurface**	**Percent**		**48%**	**23%**	**6%**	**23%**		
9	493	1	Subsurface	Aluminum	1.44E+04					0.00E+00	0%
9	493	1	Subsurface	Arsenic	1.18E+01	2.20E-05	6.45E-06	1.49E-08		2.84E-05	56%
9	493	1	Subsurface	Barium	4.04E+02					0.00E+00	0%
9	493	1	Subsurface	Beryllium	9.91E-01			6.94E-10		6.94E-10	0%
9	493	1	Subsurface	Cesium-137	2.92E-01	2.81E-08		5.18E-13	2.51E-06	2.53E-06	5%
9	493	1	Subsurface	Chromium	6.61E+01			1.62E-06		1.62E-06	3%
9	493	1	Subsurface	Cobalt	3.79E+01			9.96E-08		9.96E-08	0%
9	493	1	Subsurface	Cobalt-60	1.36E-02	1.22E-09		7.26E-14	5.70E-07	5.71E-07	1%
9	493	1	Subsurface	Manganese	3.55E+03					0.00E+00	0%
9	493	1	Subsurface	Mercury	2.60E-01					0.00E+00	0%
9	493	1	Subsurface	Neptunium-237	1.22E-01	4.39E-08		3.22E-10	3.28E-07	3.72E-07	1%
9	493	1	Subsurface	Nickel	2.13E+02			1.62E-08		1.62E-08	0%
9	493	1	Subsurface	PCB, Total	2.60E-01	6.45E-07	8.85E-07	7.31E-08		1.60E-06	3%
9	493	1	Subsurface	Thallium	6.90E-01					0.00E+00	0%
9	493	1	Subsurface	Total PAH	5.00E-01	4.53E-06	5.77E-06	9.56E-09		1.03E-05	20%
9	493	1	Subsurface	Uranium-235	1.65E-01	5.97E-08		2.49E-10	3.03E-07	3.63E-07	1%
9	493	1	Subsurface	Uranium-238	5.50E+00	2.56E-06		7.67E-09	2.12E-06	4.69E-06	9%
9	493	1	Subsurface	Vanadium	4.05E+01					0.00E+00	0%
9	**493**	**1**	**Subsurface**	**Totals**		**2.98E-05**	**1.31E-05**	**1.84E-06**	**5.83E-06**	**5.06E-05**	
9	**493**	**1**	**Subsurface**	**Percent**		**59%**	**26%**	**4%**	**12%**		
9	517	1	Subsurface	Aluminum	1.20E+04					0.00E+00	0%
9	517	1	Subsurface	Beryllium	7.39E-01			5.18E-10		5.18E-10	0%
9	517	1	Subsurface	Chromium	4.91E+01			1.20E-06		1.20E-06	10%
9	517	1	Subsurface	Cobalt-60	6.39E-03	5.72E-10		3.41E-14	2.68E-07	2.68E-07	2%
9	517	1	Subsurface	Neptunium-237	1.07E+00	3.85E-07		2.83E-09	2.88E-06	3.27E-06	28%
9	517	1	Subsurface	Nickel	1.72E+02			1.31E-08		1.31E-08	0%
9	517	1	Subsurface	PCB, Total	5.00E-01	1.24E-06	1.70E-06	1.41E-07		3.08E-06	27%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	517	1	Subsurface	Thallium	4.20E-01					0.00E+00	0%
9	517	1	Subsurface	Uranium-235	1.60E-01	5.79E-08		2.41E-10	2.94E-07	3.52E-07	3%
9	517	1	Subsurface	Uranium-238	3.89E+00	1.81E-06		5.43E-09	1.50E-06	3.32E-06	29%
9	**517**	**1**	**Subsurface**	**Totals**		**3.50E-06**	**1.70E-06**	**1.37E-06**	**4.94E-06**	**1.15E-05**	
9	**517**	**1**	**Subsurface**	**Percent**		**30%**	**15%**	**12%**	**43%**		
9	541	1	Subsurface	Aluminum	1.49E+04					0.00E+00	0%
9	541	1	Subsurface	Americium-241	7.53E+00	3.63E-06		3.16E-08	7.02E-07	4.36E-06	0%
9	541	1	Subsurface	Arsenic	9.08E+00	1.69E-05	4.97E-06	1.14E-08		2.19E-05	1%
9	541	1	Subsurface	Barium	1.36E+02					0.00E+00	0%
9	541	1	Subsurface	Beryllium	7.40E-01			5.19E-10		5.19E-10	0%
9	541	1	Subsurface	Cadmium	1.60E+00			8.39E-10		8.39E-10	0%
9	541	1	Subsurface	Cesium-137	9.72E-01	9.34E-08		1.73E-12	8.34E-06	8.44E-06	1%
9	541	1	Subsurface	Chromium	9.44E+02			2.32E-05		2.32E-05	1%
9	541	1	Subsurface	Cobalt-60	1.01E-02	9.04E-10		5.39E-14	4.23E-07	4.24E-07	0%
9	541	1	Subsurface	Iron	1.88E+04					0.00E+00	0%
9	541	1	Subsurface	Manganese	4.97E+02					0.00E+00	0%
9	541	1	Subsurface	Mercury	2.02E-01					0.00E+00	0%
9	541	1	Subsurface	Naphthalene	6.53E-01			2.16E-07		2.16E-07	0%
9	541	1	Subsurface	Neptunium-237	5.69E-02	2.05E-08		1.50E-10	1.53E-07	1.74E-07	0%
9	541	1	Subsurface	Nickel	1.58E+01			1.20E-09		1.20E-09	0%
9	541	1	Subsurface	PCB, Total	6.18E+01	1.53E-04	2.10E-04	1.74E-05		3.81E-04	25%
9	541	1	Subsurface	Total PAH	3.15E+00	2.86E-05	3.64E-05	6.03E-08		6.50E-05	4%
9	541	1	Subsurface	Uranium	7.39E+03					0.00E+00	0%
9	541	1	Subsurface	Uranium-234	1.44E+02	5.06E-05		2.45E-07	1.23E-07	5.10E-05	3%
9	541	1	Subsurface	Uranium-235	2.26E+01	8.16E-06		3.40E-08	4.14E-05	4.96E-05	3%
9	541	1	Subsurface	Uranium-238	1.11E+03	5.18E-04		1.55E-06	4.28E-04	9.47E-04	61%
9	541	1	Subsurface	Vanadium	3.54E+01					0.00E+00	0%
9	**541**	**1**	**Subsurface**	**Totals**		**7.79E-04**	**2.52E-04**	**4.27E-05**	**4.79E-04**	**1.55E-03**	
9	**541**	**1**	**Subsurface**	**Percent**		**50%**	**16%**	**3%**	**31%**		
9	561	1	Subsurface	Aluminum	1.76E+04					0.00E+00	0%
9	561	1	Subsurface	Antimony	8.95E-01					0.00E+00	0%
9	561	1	Subsurface	Arsenic	1.63E+01	3.04E-05	8.94E-06	2.06E-08		3.94E-05	23%
9	561	1	Subsurface	Barium	1.44E+02					0.00E+00	0%
9	561	1	Subsurface	Beryllium	6.74E-01			4.72E-10		4.72E-10	0%
9	561	1	Subsurface	Cesium-137	2.53E-01	2.43E-08		4.49E-13	2.17E-06	2.20E-06	1%
9	561	1	Subsurface	Chromium	9.00E+01			2.21E-06		2.21E-06	1%
9	561	1	Subsurface	Cobalt	1.10E+01			2.90E-08		2.90E-08	0%
9	561	1	Subsurface	Cobalt-60	6.98E-02	6.24E-09		3.73E-13	2.92E-06	2.93E-06	2%
9	561	1	Subsurface	Iron	2.07E+04					0.00E+00	0%
9	561	1	Subsurface	Manganese	1.81E+03					0.00E+00	0%
9	561	1	Subsurface	Neptunium-237	2.61E-02	9.39E-09		6.89E-11	7.02E-08	7.97E-08	0%
9	561	1	Subsurface	Nickel	1.49E+01			1.13E-09		1.13E-09	0%
9	561	1	Subsurface	PCB, Total	1.01E+00	2.50E-06	3.43E-06	2.84E-07		6.22E-06	4%
9	561	1	Subsurface	Thallium	3.27E-01					0.00E+00	0%
9	561	1	Subsurface	Total PAH	7.79E-01	7.06E-06	8.99E-06	1.49E-08		1.61E-05	9%
9	561	1	Subsurface	Uranium	2.65E+02					0.00E+00	0%
9	561	1	Subsurface	Uranium-234	8.48E+00	2.97E-06		1.44E-08	7.22E-09	2.99E-06	2%
9	561	1	Subsurface	Uranium-235	1.43E+00	5.16E-07		2.15E-09	2.62E-06	3.14E-06	2%
9	561	1	Subsurface	Uranium-238	1.12E+02	5.21E-05		1.56E-07	4.30E-05	9.53E-05	56%
9	561	1	Subsurface	Vanadium	3.94E+01					0.00E+00	0%
9	**561**	**1**	**Subsurface**	**Totals**		**9.56E-05**	**2.14E-05**	**2.73E-06**	**5.08E-05**	**1.70E-04**	
9	**561**	**1**	**Subsurface**	**Percent**		**56%**	**13%**	**2%**	**30%**		
9	561	2	Subsurface	Aluminum	8.86E+03					0.00E+00	0%
9	561	2	Subsurface	Antimony	5.09E+00					0.00E+00	0%
9	561	2	Subsurface	Arsenic	1.27E+01	2.36E-05	6.94E-06	1.60E-08		3.06E-05	6%
9	561	2	Subsurface	Beryllium	6.21E-01			4.35E-10		4.35E-10	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	561	2	Subsurface	Cadmium	3.95E-01			2.08E-10		2.08E-10	0%
9	561	2	Subsurface	Cesium-137	4.02E-01	3.86E-08		7.14E-13	3.45E-06	3.49E-06	1%
9	561	2	Subsurface	Chromium	3.07E+02			7.52E-06		7.52E-06	1%
9	561	2	Subsurface	Cobalt	1.09E+01			2.86E-08		2.86E-08	0%
9	561	2	Subsurface	Cobalt-60	3.02E-02	2.70E-09		1.61E-13	1.27E-06	1.27E-06	0%
9	561	2	Subsurface	Manganese	1.07E+03					0.00E+00	0%
9	561	2	Subsurface	Neptunium-237	4.76E-02	1.71E-08		1.26E-10	1.28E-07	1.45E-07	0%
9	561	2	Subsurface	PCB, Total	1.67E+01	4.14E-05	5.68E-05	4.69E-06		1.03E-04	19%
9	561	2	Subsurface	Thallium	3.83E-01					0.00E+00	0%
9	561	2	Subsurface	Total PAH	2.30E+00	2.08E-05	2.65E-05	4.39E-08		4.74E-05	9%
9	561	2	Subsurface	Uranium	1.41E+03					0.00E+00	0%
9	561	2	Subsurface	Uranium-234	3.92E+01	1.38E-05		6.67E-08	3.34E-08	1.39E-05	3%
9	561	2	Subsurface	Uranium-235	6.79E+00	2.46E-06		1.02E-08	1.25E-05	1.49E-05	3%
9	561	2	Subsurface	Uranium-238	3.86E+02	1.80E-04		5.38E-07	1.49E-04	3.29E-04	60%
9	561	2	Subsurface	Vanadium	3.32E+01					0.00E+00	0%
9	**561**	**2**	**Subsurface**	**Totals**		**2.82E-04**	**9.02E-05**	**1.29E-05**	**1.66E-04**	**5.51E-04**	
9	**561**	**2**	**Subsurface**	**Percent**		**51%**	**16%**	**2%**	**30%**		
9	562	1	Subsurface	Arsenic	1.18E+01	2.20E-05	6.45E-06	1.49E-08		2.84E-05	31%
9	562	1	Subsurface	Cesium-137	4.52E-01	4.34E-08		8.02E-13	3.88E-06	3.92E-06	4%
9	562	1	Subsurface	Chromium	3.15E+02			7.72E-06		7.72E-06	8%
9	562	1	Subsurface	PCB, Total	2.01E+00	4.99E-06	6.84E-06	5.65E-07		1.24E-05	14%
9	562	1	Subsurface	Uranium	2.27E+02					0.00E+00	0%
9	562	1	Subsurface	Uranium-235	5.91E-01	2.14E-07		8.91E-10	1.08E-06	1.30E-06	1%
9	562	1	Subsurface	Uranium-238	4.42E+01	2.06E-05		6.17E-08	1.70E-05	3.77E-05	41%
9	**562**	**1**	**Subsurface**	**Totals**		**4.78E-05**	**1.33E-05**	**8.37E-06**	**2.20E-05**	**9.15E-05**	
9	**562**	**1**	**Subsurface**	**Percent**		**52%**	**15%**	**9%**	**24%**		
9	562	2	Subsurface	Cesium-137	3.58E-01	3.44E-08		6.36E-13	3.07E-06	3.11E-06	1%
9	562	2	Subsurface	PCB, Total	1.58E+00	3.92E-06	5.38E-06	4.44E-07		9.74E-06	2%
9	562	2	Subsurface	Uranium-234	5.34E+01	1.87E-05		9.08E-08	4.55E-08	1.89E-05	3%
9	562	2	Subsurface	Uranium-235	8.96E+00	3.24E-06		1.35E-08	1.64E-05	1.97E-05	4%
9	562	2	Subsurface	Uranium-238	5.81E+02	2.71E-04		8.10E-07	2.24E-04	4.95E-04	91%
9	**562**	**2**	**Subsurface**	**Totals**		**2.97E-04**	**5.38E-06**	**1.36E-06**	**2.43E-04**	**5.47E-04**	
9	**562**	**2**	**Subsurface**	**Percent**		**54%**	**1%**	**0%**	**44%**		
9	562	3	Subsurface	PCB, Total	2.40E-01	5.96E-07	8.17E-07	6.75E-08		1.48E-06	9%
9	562	3	Subsurface	Total PAH	2.20E-01	1.99E-06	2.54E-06	4.21E-09		4.54E-06	29%
9	562	3	Subsurface	Uranium	5.89E+01					0.00E+00	0%
9	562	3	Subsurface	Uranium-235	1.63E-01	5.90E-08		2.46E-10	2.99E-07	3.58E-07	2%
9	562	3	Subsurface	Uranium-238	1.09E+01	5.08E-06		1.52E-08	4.20E-06	9.30E-06	59%
9	**562**	**3**	**Subsurface**	**Totals**		**7.73E-06**	**3.35E-06**	**8.72E-08**	**4.50E-06**	**1.57E-05**	
9	**562**	**3**	**Subsurface**	**Percent**		**49%**	**21%**	**1%**	**29%**		
9	562	4	Subsurface	Cesium-137	4.91E-01	4.72E-08		8.72E-13	4.21E-06	4.26E-06	57%
9	562	4	Subsurface	Chromium	4.67E+01			1.14E-06		1.14E-06	15%
9	562	4	Subsurface	Uranium	2.10E+01					0.00E+00	0%
9	562	4	Subsurface	Uranium-238	2.42E+00	1.13E-06		3.38E-09	9.32E-07	2.06E-06	28%
9	**562**	**4**	**Subsurface**	**Totals**		**1.18E-06**		**1.15E-06**	**5.15E-06**	**7.47E-06**	
9	**562**	**4**	**Subsurface**	**Percent**		**16%**		**15%**	**69%**		
9	562	5	Subsurface	Cesium-137	3.80E-01	3.65E-08		6.75E-13	3.26E-06	3.30E-06	5%
9	562	5	Subsurface	Chromium	1.53E+02			3.76E-06		3.76E-06	5%
9	562	5	Subsurface	PCB, Total	9.50E-01	2.36E-06	3.23E-06	2.67E-07		5.86E-06	8%
9	562	5	Subsurface	Total PAH	7.05E-02	6.39E-07	8.13E-07	1.35E-09		1.45E-06	2%
9	562	5	Subsurface	Uranium	2.08E+02					0.00E+00	0%
9	562	5	Subsurface	Uranium-234	8.57E+00	3.01E-06		1.46E-08	7.30E-09	3.03E-06	4%
9	562	5	Subsurface	Uranium-235	9.50E-01	3.44E-07		1.43E-09	1.74E-06	2.09E-06	3%
9	562	5	Subsurface	Uranium-238	6.24E+01	2.91E-05		8.70E-08	2.40E-05	5.32E-05	73%
9	**562**	**5**	**Subsurface**	**Totals**		**3.55E-05**	**4.05E-06**	**4.13E-06**	**2.90E-05**	**7.27E-05**	
9	**562**	**5**	**Subsurface**	**Percent**		**49%**	**6%**	**6%**	**40%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	562	6	Subsurface	Uranium-234	4.01E+01	1.41E-05		6.82E-08	3.41E-08	1.42E-05	4%
9	562	6	Subsurface	Uranium-235	6.81E+00	2.46E-06		1.03E-08	1.25E-05	1.50E-05	4%
9	562	6	Subsurface	Uranium-238	3.62E+02	1.69E-04		5.04E-07	1.39E-04	3.08E-04	91%
9	**562**	**6**	**Subsurface**	**Totals**		**1.85E-04**		**5.83E-07**	**1.52E-04**	**3.38E-04**	
9	**562**	**6**	**Subsurface**	**Percent**		**55%**		**0%**	**45%**		
9	563	1	Subsurface	Cadmium	8.96E-01			4.71E-10		4.71E-10	0%
9	563	1	Subsurface	Cesium-137	2.88E-01	2.77E-08		5.11E-13	2.47E-06	2.50E-06	7%
9	563	1	Subsurface	Chromium	3.34E+02			8.19E-06		8.19E-06	23%
9	563	1	Subsurface	Neptunium-237	1.20E-01	4.32E-08		3.17E-10	3.23E-07	3.66E-07	1%
9	563	1	Subsurface	PCB, Total	3.54E+00	8.79E-06	1.20E-05	9.96E-07		2.18E-05	62%
9	563	1	Subsurface	Uranium	1.51E+01					0.00E+00	0%
9	563	1	Subsurface	Uranium-238	2.96E+00	1.38E-06		4.13E-09	1.14E-06	2.52E-06	7%
9	**563**	**1**	**Subsurface**	**Totals**		**1.02E-05**	**1.20E-05**	**9.19E-06**	**3.93E-06**	**3.54E-05**	
9	**563**	**1**	**Subsurface**	**Percent**		**29%**	**34%**	**26%**	**11%**		
9	563	2	Subsurface	Cesium-137	6.47E-01	6.22E-08		1.15E-12	5.55E-06	5.62E-06	82%
9	563	2	Subsurface	Uranium-238	1.49E+00	6.95E-07		2.08E-09	5.74E-07	1.27E-06	18%
9	**563**	**2**	**Subsurface**	**Totals**		**7.57E-07**		**2.08E-09**	**6.13E-06**	**6.89E-06**	
9	**563**	**2**	**Subsurface**	**Percent**		**11%**		**0%**	**89%**		
9	564	1	Subsurface	Aluminum	1.27E+04					0.00E+00	0%
9	564	1	Subsurface	Arsenic	4.30E+01	8.01E-05	2.35E-05	5.42E-08		1.04E-04	76%
9	564	1	Subsurface	Beryllium	2.12E+00			1.49E-09		1.49E-09	0%
9	564	1	Subsurface	Cadmium	1.96E+00			1.03E-09		1.03E-09	0%
9	564	1	Subsurface	Cesium-137	6.20E-01	5.96E-08		1.10E-12	5.32E-06	5.38E-06	4%
9	564	1	Subsurface	Chromium	8.32E+01			2.04E-06		2.04E-06	2%
9	564	1	Subsurface	Iron	3.66E+04					0.00E+00	0%
9	564	1	Subsurface	Mercury	2.30E-01					0.00E+00	0%
9	564	1	Subsurface	Nickel	2.24E+01			1.70E-09		1.70E-09	0%
9	564	1	Subsurface	PCB, Total	1.93E+00	4.79E-06	6.57E-06	5.43E-07		1.19E-05	9%
9	564	1	Subsurface	Thallium	2.36E+00					0.00E+00	0%
9	564	1	Subsurface	Thorium-230	5.01E+00	2.25E-06		2.13E-08	1.39E-08	2.28E-06	2%
9	564	1	Subsurface	Uranium	5.83E+01					0.00E+00	0%
9	564	1	Subsurface	Uranium-234	6.93E+00	2.43E-06		1.18E-08	5.90E-09	2.45E-06	2%
9	564	1	Subsurface	Uranium-235	3.87E-01	1.40E-07		5.83E-10	7.10E-07	8.51E-07	1%
9	564	1	Subsurface	Uranium-238	8.54E+00	3.98E-06		1.19E-08	3.29E-06	7.28E-06	5%
9	564	1	Subsurface	Vanadium	8.06E+01					0.00E+00	0%
9	**564**	**1**	**Subsurface**	**Totals**		**9.37E-05**	**3.01E-05**	**2.69E-06**	**9.34E-06**	**1.36E-04**	
9	**564**	**1**	**Subsurface**	**Percent**		**69%**	**22%**	**2%**	**7%**		
9	567	1	Subsurface	Aluminum	1.29E+04					0.00E+00	
9	567	1	Subsurface	Manganese	1.32E+03					0.00E+00	
9	**567**	**1**	**Subsurface**	**Totals**						**0.00E+00**	
9	**567**	**1**	**Subsurface**	**Percent**							
9	567	3	Subsurface	Chromium	5.21E+01			1.28E-06		1.28E-06	47%
9	567	3	Subsurface	Uranium-238	1.72E+00	8.02E-07		2.40E-09	6.63E-07	1.47E-06	53%
9	**567**	**3**	**Subsurface**	**Totals**		**8.02E-07**		**1.28E-06**	**6.63E-07**	**2.74E-06**	
9	**567**	**3**	**Subsurface**	**Percent**		**29%**		**47%**	**24%**		
9	567	4	Subsurface	Aluminum	1.25E+04					0.00E+00	0%
9	567	4	Subsurface	Arsenic	1.09E+01	2.03E-05	5.96E-06	1.37E-08		2.62E-05	97%
9	567	4	Subsurface	Uranium-238	1.08E+00	5.04E-07		1.51E-09	4.17E-07	9.23E-07	3%
9	**567**	**4**	**Subsurface**	**Totals**		**2.08E-05**	**5.96E-06**	**1.52E-08**	**4.17E-07**	**2.72E-05**	
9	**567**	**4**	**Subsurface**	**Percent**		**76%**	**22%**	**0%**	**2%**		
10	14	1	Subsurface	Americium-241	1.06E+00	5.11E-07		4.45E-09	9.89E-08	6.15E-07	1%
10	14	1	Subsurface	Antimony	6.30E-01					0.00E+00	0%
10	14	1	Subsurface	Arsenic	1.13E+01	2.09E-05	6.15E-06	1.42E-08		2.71E-05	58%
10	14	1	Subsurface	Beryllium	6.84E-01			4.79E-10		4.79E-10	0%
10	14	1	Subsurface	Chromium	6.56E+01			1.61E-06		1.61E-06	3%
10	14	1	Subsurface	Cobalt-60	2.42E-02	2.17E-09		1.29E-13	1.01E-06	1.02E-06	2%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	1	Subsurface	Iron	4.24E+04					0.00E+00	0%
10	14	1	Subsurface	Manganese	8.41E+02					0.00E+00	0%
10	14	1	Subsurface	Neptunium-237	2.64E-01	9.49E-08		6.97E-10	7.10E-07	8.06E-07	2%
10	14	1	Subsurface	Nickel	7.40E+02			5.61E-08		5.61E-08	0%
10	14	1	Subsurface	PCB, Total	5.00E-01	1.24E-06	1.70E-06	1.41E-07		3.08E-06	7%
10	14	1	Subsurface	Silver	1.67E+01					0.00E+00	0%
10	14	1	Subsurface	Technetium-99	4.06E+02	6.90E-06		8.54E-10	1.12E-07	7.02E-06	15%
10	14	1	Subsurface	Uranium	2.56E+02					0.00E+00	0%
10	14	1	Subsurface	Uranium-235	1.99E-01	7.20E-08		3.00E-10	3.65E-07	4.37E-07	1%
10	14	1	Subsurface	Uranium-238	6.24E+00	2.91E-06		8.70E-09	2.40E-06	5.32E-06	11%
10	14	1	Subsurface	Vanadium	2.99E+01					0.00E+00	0%
10	**14**	**1**	**Subsurface**	**Totals**		**3.27E-05**	**7.85E-06**	**1.84E-06**	**4.70E-06**	**4.71E-05**	
10	**14**	**1**	**Subsurface**	**Percent**		**69%**	**17%**	**4%**	**10%**		
10	14	2	Subsurface	Aluminum	1.00E+04					0.00E+00	0%
10	14	2	Subsurface	Antimony	3.51E+00					0.00E+00	0%
10	14	2	Subsurface	Arsenic	1.47E+01	2.74E-05	8.05E-06	1.85E-08		3.55E-05	19%
10	14	2	Subsurface	Beryllium	6.75E-01			4.73E-10		4.73E-10	0%
10	14	2	Subsurface	Cadmium	1.75E+00			9.20E-10		9.20E-10	0%
10	14	2	Subsurface	Chromium	7.24E+01			1.77E-06		1.77E-06	1%
10	14	2	Subsurface	Copper	1.92E+02					0.00E+00	0%
10	14	2	Subsurface	Iron	4.38E+04					0.00E+00	0%
10	14	2	Subsurface	Manganese	1.51E+03					0.00E+00	0%
10	14	2	Subsurface	Mercury	8.88E+00					0.00E+00	0%
10	14	2	Subsurface	Neptunium-237	1.70E+00	6.11E-07		4.48E-09	4.57E-06	5.18E-06	3%
10	14	2	Subsurface	Nickel	8.41E+02			6.38E-08		6.38E-08	0%
10	14	2	Subsurface	PCB, Total	5.00E+00	1.24E-05	1.70E-05	1.41E-06		3.08E-05	17%
10	14	2	Subsurface	Selenium	2.74E+01					0.00E+00	0%
10	14	2	Subsurface	Silver	9.58E+00					0.00E+00	0%
10	14	2	Subsurface	Thorium-230	7.70E+00	3.45E-06		3.27E-08	2.13E-08	3.51E-06	2%
10	14	2	Subsurface	Total PAH	2.31E-01	2.09E-06	2.66E-06	4.42E-09		4.76E-06	3%
10	14	2	Subsurface	Uranium	3.64E+02					0.00E+00	0%
10	14	2	Subsurface	Uranium-234	4.81E+01	1.69E-05		8.18E-08	4.09E-08	1.70E-05	9%
10	14	2	Subsurface	Uranium-235	3.41E+00	1.23E-06		5.14E-09	6.26E-06	7.50E-06	4%
10	14	2	Subsurface	Uranium-238	8.96E+01	4.18E-05		1.25E-07	3.45E-05	7.64E-05	42%
10	**14**	**2**	**Subsurface**	**Totals**		**1.06E-04**	**2.77E-05**	**3.52E-06**	**4.54E-05**	**1.83E-04**	
10	**14**	**2**	**Subsurface**	**Percent**		**58%**	**15%**	**2%**	**25%**		
10	14	3	Subsurface	Arsenic	1.91E+01	3.55E-05	1.04E-05	2.40E-08		4.59E-05	40%
10	14	3	Subsurface	Beryllium	2.07E+00			1.45E-09		1.45E-09	0%
10	14	3	Subsurface	Chromium	7.01E+01			1.72E-06		1.72E-06	2%
10	14	3	Subsurface	Cobalt	1.63E+01			4.27E-08		4.27E-08	0%
10	14	3	Subsurface	Copper	1.30E+02					0.00E+00	0%
10	14	3	Subsurface	Iron	4.64E+04					0.00E+00	0%
10	14	3	Subsurface	Manganese	1.24E+03					0.00E+00	0%
10	14	3	Subsurface	Mercury	7.48E+00					0.00E+00	0%
10	14	3	Subsurface	Molybdenum	2.23E+01					0.00E+00	0%
10	14	3	Subsurface	Neptunium-237	1.61E-01	5.79E-08		4.25E-10	4.33E-07	4.91E-07	0%
10	14	3	Subsurface	Nickel	6.64E+02			5.04E-08		5.04E-08	0%
10	14	3	Subsurface	PCB, Total	8.75E+00	2.17E-05	2.98E-05	2.46E-06		5.40E-05	48%
10	14	3	Subsurface	Silver	1.34E+01					0.00E+00	0%
10	14	3	Subsurface	Uranium	2.19E+02					0.00E+00	0%
10	14	3	Subsurface	Uranium-234	4.43E+00	1.55E-06		7.53E-09	3.77E-09	1.56E-06	1%
10	14	3	Subsurface	Uranium-235	2.46E-01	8.90E-08		3.71E-10	4.51E-07	5.41E-07	0%
10	14	3	Subsurface	Uranium-238	1.08E+01	5.03E-06		1.51E-08	4.16E-06	9.21E-06	8%
10	14	3	Subsurface	Vanadium	6.19E+01					0.00E+00	0%
10	**14**	**3**	**Subsurface**	**Totals**		**6.39E-05**	**4.02E-05**	**4.32E-06**	**5.05E-06**	**1.13E-04**	
10	**14**	**3**	**Subsurface**	**Percent**		**56%**	**35%**	**4%**	**4%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	4	Subsurface	Aluminum	1.18E+04					0.00E+00	0%
10	14	4	Subsurface	Antimony	3.29E+00					0.00E+00	0%
10	14	4	Subsurface	Arsenic	1.24E+01	2.32E-05	6.80E-06	1.57E-08		3.00E-05	12%
10	14	4	Subsurface	Chromium	5.66E+01			1.39E-06		1.39E-06	1%
10	14	4	Subsurface	Cobalt	1.46E+01			3.84E-08		3.84E-08	0%
10	14	4	Subsurface	Copper	3.59E+02					0.00E+00	0%
10	14	4	Subsurface	Iron	3.89E+04					0.00E+00	0%
10	14	4	Subsurface	Manganese	9.96E+02					0.00E+00	0%
10	14	4	Subsurface	Mercury	8.00E+00					0.00E+00	0%
10	14	4	Subsurface	Neptunium-237	2.03E+00	7.30E-07		5.36E-09	5.46E-06	6.20E-06	2%
10	14	4	Subsurface	Nickel	7.31E+02			5.55E-08		5.55E-08	0%
10	14	4	Subsurface	PCB, Total	8.28E+00	2.06E-05	2.82E-05	2.33E-06		5.11E-05	21%
10	14	4	Subsurface	Silver	1.17E+01					0.00E+00	0%
10	14	4	Subsurface	Thorium-230	5.43E+00	2.43E-06		2.31E-08	1.50E-08	2.47E-06	1%
10	14	4	Subsurface	Total PAH	1.89E-01	1.71E-06	2.18E-06	3.61E-09		3.90E-06	2%
10	14	4	Subsurface	Uranium	3.72E+02					0.00E+00	0%
10	14	4	Subsurface	Uranium-234	8.61E+01	3.02E-05		1.46E-07	7.33E-08	3.04E-05	12%
10	14	4	Subsurface	Uranium-235	6.10E+00	2.21E-06		9.20E-09	1.12E-05	1.34E-05	5%
10	14	4	Subsurface	Uranium-238	1.29E+02	5.99E-05		1.79E-07	4.95E-05	1.10E-04	44%
10	**14**	**4**	**Subsurface**	**Totals**		**1.41E-04**	**3.72E-05**	**4.19E-06**	**6.62E-05**	**2.49E-04**	
10	**14**	**4**	**Subsurface**	**Percent**		**57%**	**15%**	**2%**	**27%**		
10	14	5	Subsurface	Antimony	1.60E+00					0.00E+00	0%
10	14	5	Subsurface	Arsenic	1.27E+01	2.36E-05	6.92E-06	1.59E-08		3.05E-05	18%
10	14	5	Subsurface	Beryllium	7.93E-01			5.56E-10		5.56E-10	0%
10	14	5	Subsurface	Cadmium	2.59E+00			1.36E-09		1.36E-09	0%
10	14	5	Subsurface	Chromium	4.70E+01			1.15E-06		1.15E-06	1%
10	14	5	Subsurface	Cobalt	1.11E+01			2.91E-08		2.91E-08	0%
10	14	5	Subsurface	Copper	1.34E+02					0.00E+00	0%
10	14	5	Subsurface	Iron	3.93E+04					0.00E+00	0%
10	14	5	Subsurface	Manganese	1.06E+03					0.00E+00	0%
10	14	5	Subsurface	Mercury	1.09E+01					0.00E+00	0%
10	14	5	Subsurface	Neptunium-237	1.74E+00	6.26E-07		4.59E-09	4.68E-06	5.31E-06	3%
10	14	5	Subsurface	Nickel	4.63E+02			3.51E-08		3.51E-08	0%
10	14	5	Subsurface	PCB, Total	7.64E+00	1.90E-05	2.60E-05	2.15E-06		4.71E-05	27%
10	14	5	Subsurface	Silver	1.29E+01					0.00E+00	0%
10	14	5	Subsurface	Technetium-99	7.80E+01	1.33E-06		1.64E-10	2.14E-08	1.35E-06	1%
10	14	5	Subsurface	Thallium	3.52E-01					0.00E+00	0%
10	14	5	Subsurface	Thorium-230	1.09E+01	4.88E-06		4.63E-08	3.01E-08	4.96E-06	3%
10	14	5	Subsurface	Total PAH	9.48E-02	8.59E-07	1.09E-06	1.81E-09		1.95E-06	1%
10	14	5	Subsurface	Uranium	2.62E+02					0.00E+00	0%
10	14	5	Subsurface	Uranium-234	4.03E+01	1.41E-05		6.85E-08	3.43E-08	1.42E-05	8%
10	14	5	Subsurface	Uranium-235	2.57E+00	9.31E-07		3.88E-09	4.72E-06	5.65E-06	3%
10	14	5	Subsurface	Uranium-238	7.26E+01	3.38E-05		1.01E-07	2.80E-05	6.19E-05	36%
10	14	5	Subsurface	Vanadium	3.68E+01					0.00E+00	0%
10	**14**	**5**	**Subsurface**	**Totals**		**9.91E-05**	**3.40E-05**	**3.61E-06**	**3.75E-05**	**1.74E-04**	
10	**14**	**5**	**Subsurface**	**Percent**		**57%**	**20%**	**2%**	**22%**		
10	14	6	Subsurface	Antimony	2.13E+00					0.00E+00	0%
10	14	6	Subsurface	Arsenic	1.05E+01	1.95E-05	5.74E-06	1.32E-08		2.53E-05	21%
10	14	6	Subsurface	Cadmium	6.57E-01			3.45E-10		3.45E-10	0%
10	14	6	Subsurface	Chromium	4.39E+02			1.08E-05		1.08E-05	9%
10	14	6	Subsurface	Copper	1.22E+02					0.00E+00	0%
10	14	6	Subsurface	Manganese	6.55E+02					0.00E+00	0%
10	14	6	Subsurface	Mercury	3.47E-01					0.00E+00	0%
10	14	6	Subsurface	Neptunium-237	2.04E+00	7.33E-07		5.38E-09	5.48E-06	6.22E-06	5%
10	14	6	Subsurface	Nickel	9.63E+02			7.31E-08		7.31E-08	0%
10	14	6	Subsurface	PCB, Total	5.00E+00	1.24E-05	1.70E-05	1.41E-06		3.08E-05	25%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	6	Subsurface	Silver	1.47E+01					0.00E+00	0%
10	14	6	Subsurface	Uranium	5.77E+02					0.00E+00	0%
10	14	6	Subsurface	Uranium-234	2.59E+01	9.09E-06		4.41E-08	2.21E-08	9.16E-06	8%
10	14	6	Subsurface	Uranium-235	1.79E+00	6.47E-07		2.69E-09	3.28E-06	3.93E-06	3%
10	14	6	Subsurface	Uranium-238	4.11E+01	1.92E-05		5.73E-08	1.58E-05	3.51E-05	29%
10	**14**	**6**	**Subsurface**	**Totals**		**6.16E-05**	**2.28E-05**	**1.24E-05**	**2.46E-05**	**1.21E-04**	
10	**14**	**6**	**Subsurface**	**Percent**		**51%**	**19%**	**10%**	**20%**		
10	14	7	Subsurface	Antimony	6.02E-01					0.00E+00	0%
10	14	7	Subsurface	Arsenic	1.12E+01	2.09E-05	6.14E-06	1.41E-08		2.71E-05	27%
10	14	7	Subsurface	Cadmium	2.11E+00			1.11E-09		1.11E-09	0%
10	14	7	Subsurface	Chromium	6.46E+01			1.58E-06		1.58E-06	2%
10	14	7	Subsurface	Manganese	5.99E+02					0.00E+00	0%
10	14	7	Subsurface	Mercury	7.82E+00					0.00E+00	0%
10	14	7	Subsurface	Neptunium-237	1.16E+00	4.18E-07		3.07E-09	3.12E-06	3.54E-06	4%
10	14	7	Subsurface	Nickel	1.22E+03			9.28E-08		9.28E-08	0%
10	14	7	Subsurface	PCB, Total	7.60E+00	1.89E-05	2.59E-05	2.14E-06		4.69E-05	47%
10	14	7	Subsurface	Silver	1.63E+01					0.00E+00	0%
10	14	7	Subsurface	Total PAH	4.88E-02	4.42E-07	5.63E-07	9.33E-10		1.01E-06	1%
10	14	7	Subsurface	Uranium	3.33E+02					0.00E+00	0%
10	14	7	Subsurface	Uranium-234	9.86E+00	3.46E-06		1.68E-08	8.40E-09	3.48E-06	4%
10	14	7	Subsurface	Uranium-235	7.29E-01	2.64E-07		1.10E-09	1.34E-06	1.60E-06	2%
10	14	7	Subsurface	Uranium-238	1.60E+01	7.48E-06		2.24E-08	6.18E-06	1.37E-05	14%
10	**14**	**7**	**Subsurface**	**Totals**		**5.18E-05**	**3.26E-05**	**3.87E-06**	**1.06E-05**	**9.90E-05**	
10	**14**	**7**	**Subsurface**	**Percent**		**52%**	**33%**	**4%**	**11%**		
10	14	8	Subsurface	Antimony	5.01E-01					0.00E+00	0%
10	14	8	Subsurface	Arsenic	1.22E+01	2.27E-05	6.66E-06	1.53E-08		2.94E-05	43%
10	14	8	Subsurface	Chromium	5.14E+01			1.26E-06		1.26E-06	2%
10	14	8	Subsurface	Copper	1.17E+02					0.00E+00	0%
10	14	8	Subsurface	Mercury	8.70E+00					0.00E+00	0%
10	14	8	Subsurface	Neptunium-237	6.77E-01	2.43E-07		1.79E-09	1.82E-06	2.07E-06	3%
10	14	8	Subsurface	Nickel	6.73E+02			5.10E-08		5.10E-08	0%
10	14	8	Subsurface	PCB, Total	5.00E+00	1.24E-05	1.70E-05	1.41E-06		3.08E-05	45%
10	14	8	Subsurface	Silver	1.18E+01					0.00E+00	0%
10	14	8	Subsurface	Total PAH	4.13E-02	3.74E-07	4.76E-07	7.90E-10		8.51E-07	1%
10	14	8	Subsurface	Uranium	4.05E+02					0.00E+00	0%
10	14	8	Subsurface	Uranium-235	1.61E-01	5.83E-08		2.43E-10	2.95E-07	3.54E-07	1%
10	14	8	Subsurface	Uranium-238	3.97E+00	1.85E-06		5.54E-09	1.53E-06	3.38E-06	5%
10	**14**	**8**	**Subsurface**	**Totals**		**3.76E-05**	**2.42E-05**	**2.74E-06**	**3.65E-06**	**6.82E-05**	
10	**14**	**8**	**Subsurface**	**Percent**		**55%**	**35%**	**4%**	**5%**		
10	14	9	Subsurface	Antimony	2.00E+00					0.00E+00	0%
10	14	9	Subsurface	Arsenic	1.39E+01	2.58E-05	7.59E-06	1.75E-08		3.35E-05	2%
10	14	9	Subsurface	Cadmium	9.40E-01			4.94E-10		4.94E-10	0%
10	14	9	Subsurface	Cesium-137	4.53E-01	4.35E-08		8.04E-13	3.89E-06	3.93E-06	0%
10	14	9	Subsurface	Chromium	4.64E+01			1.14E-06		1.14E-06	0%
10	14	9	Subsurface	Mercury	1.13E+00					0.00E+00	0%
10	14	9	Subsurface	Neptunium-237	1.09E+01	3.93E-06		2.89E-08	2.94E-05	3.34E-05	2%
10	14	9	Subsurface	Nickel	9.43E+02			7.16E-08		7.16E-08	0%
10	14	9	Subsurface	PCB, Total	6.84E+00	1.70E-05	2.33E-05	1.92E-06		4.22E-05	3%
10	14	9	Subsurface	Technetium-99	1.96E+02	3.33E-06		4.12E-10	5.39E-08	3.39E-06	0%
10	14	9	Subsurface	Total PAH	4.87E-01	4.42E-06	5.62E-06	9.32E-09		1.00E-05	1%
10	14	9	Subsurface	Uranium	1.46E+03					0.00E+00	0%
10	14	9	Subsurface	Uranium-234	8.32E+02	2.92E-04		1.42E-06	7.09E-07	2.94E-04	19%
10	14	9	Subsurface	Uranium-235	5.46E+01	1.97E-05		8.22E-08	1.00E-04	1.20E-04	8%
10	14	9	Subsurface	Uranium-238	1.20E+03	5.59E-04		1.67E-06	4.62E-04	1.02E-03	65%
10	**14**	**9**	**Subsurface**	**Totals**		**9.26E-04**	**3.65E-05**	**6.36E-06**	**5.96E-04**	**1.56E-03**	
10	**14**	**9**	**Subsurface**	**Percent**		**59%**	**2%**	**0%**	**38%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	10	Subsurface	Antimony	8.55E-01					0.00E+00	0%
10	14	10	Subsurface	Arsenic	1.15E+01	2.14E-05	6.30E-06	1.45E-08		2.77E-05	21%
10	14	10	Subsurface	Barium	1.39E+02					0.00E+00	0%
10	14	10	Subsurface	Chromium	4.47E+01			1.10E-06		1.10E-06	1%
10	14	10	Subsurface	Copper	1.37E+02					0.00E+00	0%
10	14	10	Subsurface	Iron	2.69E+04					0.00E+00	0%
10	14	10	Subsurface	Manganese	7.11E+02					0.00E+00	0%
10	14	10	Subsurface	Mercury	2.49E+01					0.00E+00	0%
10	14	10	Subsurface	Neptunium-237	2.05E+00	7.35E-07		5.40E-09	5.50E-06	6.24E-06	5%
10	14	10	Subsurface	Nickel	5.80E+02			4.40E-08		4.40E-08	0%
10	14	10	Subsurface	PCB, Total	9.32E+00	2.31E-05	3.17E-05	2.62E-06		5.75E-05	44%
10	14	10	Subsurface	Silver	1.07E+01					0.00E+00	0%
10	14	10	Subsurface	Total PAH	2.10E-01	1.90E-06	2.42E-06	4.02E-09		4.33E-06	3%
10	14	10	Subsurface	Uranium	2.80E+02					0.00E+00	0%
10	14	10	Subsurface	Uranium-234	1.92E+01	6.73E-06		3.27E-08	1.63E-08	6.78E-06	5%
10	14	10	Subsurface	Uranium-235	1.40E+00	5.06E-07		2.11E-09	2.57E-06	3.07E-06	2%
10	14	10	Subsurface	Uranium-238	2.68E+01	1.25E-05		3.74E-08	1.03E-05	2.29E-05	18%
10	**14**	**10**	**Subsurface**	**Totals**		**6.70E-05**	**4.04E-05**	**3.86E-06**	**1.84E-05**	**1.30E-04**	
10	**14**	**10**	**Subsurface**	**Percent**		**52%**	**31%**	**3%**	**14%**		
10	518	1	Subsurface	Arsenic	6.45E+00	1.20E-05	3.53E-06	8.12E-09		1.55E-05	2%
10	518	1	Subsurface	Carbazole	1.17E+01	2.91E-07	2.85E-07			5.76E-07	0%
10	518	1	Subsurface	Cobalt	6.80E+00			1.79E-08		1.79E-08	0%
10	518	1	Subsurface	Nickel	1.29E+01			9.76E-10		9.76E-10	0%
10	518	1	Subsurface	PCB, Total	6.30E-01	1.56E-06	2.14E-06	1.77E-07		3.89E-06	0%
10	518	1	Subsurface	Pyrene	3.94E+01					0.00E+00	0%
10	518	1	Subsurface	Total PAH	3.90E+01	3.53E-04	4.49E-04	7.45E-07		8.03E-04	97%
10	518	1	Subsurface	Uranium	2.17E+02					0.00E+00	0%
10	518	1	Subsurface	Uranium-235	6.74E-02	2.44E-08		1.02E-10	1.24E-07	1.48E-07	0%
10	518	1	Subsurface	Uranium-238	1.51E+00	7.06E-07		2.11E-09	5.83E-07	1.29E-06	0%
10	**518**	**1**	**Subsurface**	**Totals**		**3.68E-04**	**4.55E-04**	**9.51E-07**	**7.07E-07**	**8.25E-04**	
10	**518**	**1**	**Subsurface**	**Percent**		**45%**	**55%**	**0%**	**0%**		
10	520	1	Subsurface	Aluminum	9.61E+03					0.00E+00	0%
10	520	1	Subsurface	Arsenic	8.83E+00	1.64E-05	4.83E-06	1.11E-08		2.13E-05	52%
10	520	1	Subsurface	Barium	1.57E+02					0.00E+00	0%
10	520	1	Subsurface	Beryllium	5.77E-01			4.04E-10		4.04E-10	0%
10	520	1	Subsurface	Cesium-137	8.53E-01	8.20E-08		1.51E-12	7.32E-06	7.40E-06	18%
10	520	1	Subsurface	Chromium	5.95E+01			1.46E-06		1.46E-06	4%
10	520	1	Subsurface	Cobalt	1.08E+01			2.83E-08		2.83E-08	0%
10	520	1	Subsurface	Iron	1.70E+04					0.00E+00	0%
10	520	1	Subsurface	Manganese	7.31E+02					0.00E+00	0%
10	520	1	Subsurface	Mercury	1.07E+01					0.00E+00	0%
10	520	1	Subsurface	Neptunium-237	5.37E-01	1.93E-07		1.42E-09	1.44E-06	1.64E-06	4%
10	520	1	Subsurface	Nickel	2.56E+02			1.94E-08		1.94E-08	0%
10	520	1	Subsurface	Silver	1.40E+01					0.00E+00	0%
10	520	1	Subsurface	Thorium-230	1.02E+01	4.58E-06		4.34E-08	2.83E-08	4.65E-06	11%
10	520	1	Subsurface	Total PAH	3.18E-02	2.88E-07	3.67E-07	6.09E-10		6.56E-07	2%
10	520	1	Subsurface	Uranium	1.75E+01					0.00E+00	0%
10	520	1	Subsurface	Uranium-235	1.21E-01	4.38E-08		1.82E-10	2.22E-07	2.66E-07	1%
10	520	1	Subsurface	Uranium-238	3.69E+00	1.72E-06		5.14E-09	1.42E-06	3.15E-06	8%
10	**520**	**1**	**Subsurface**	**Totals**		**2.33E-05**	**5.20E-06**	**1.57E-06**	**1.04E-05**	**4.05E-05**	
10	**520**	**1**	**Subsurface**	**Percent**		**58%**	**13%**	**4%**	**26%**		
10	520	2	Subsurface	Arsenic	9.87E+00	1.84E-05	5.40E-06	1.24E-08		2.38E-05	30%
10	520	2	Subsurface	Chromium	6.67E+01			1.63E-06		1.63E-06	2%
10	520	2	Subsurface	Manganese	6.49E+02					0.00E+00	0%
10	520	2	Subsurface	Mercury	1.19E+01					0.00E+00	0%
10	520	2	Subsurface	Neptunium-237	5.90E-02	2.12E-08		1.56E-10	1.59E-07	1.80E-07	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	520	2	Subsurface	Nickel	3.10E+02			2.36E-08		2.36E-08	0%
10	520	2	Subsurface	Radium-226	1.56E+00	2.53E-06		2.70E-09	4.48E-05	4.73E-05	60%
10	520	2	Subsurface	Total PAH	2.53E-01	2.29E-06	2.92E-06	4.84E-09		5.22E-06	7%
10	520	2	Subsurface	Uranium	3.96E+01					0.00E+00	0%
10	520	2	Subsurface	Uranium-238	1.58E+00	7.34E-07		2.20E-09	6.07E-07	1.34E-06	2%
10	**520**	**2**	**Subsurface**	**Totals**		**2.40E-05**	**8.32E-06**	**1.68E-06**	**4.55E-05**	**7.95E-05**	
10	**520**	**2**	**Subsurface**	**Percent**		**30%**	**10%**	**2%**	**57%**		
10	520	3	Subsurface	Arsenic	1.04E+01	1.94E-05	5.71E-06	1.32E-08		2.52E-05	85%
10	520	3	Subsurface	Chromium	6.57E+01			1.61E-06		1.61E-06	5%
10	520	3	Subsurface	Copper	1.18E+02					0.00E+00	0%
10	520	3	Subsurface	Mercury	6.65E+00					0.00E+00	0%
10	520	3	Subsurface	Nickel	3.31E+02			2.51E-08		2.51E-08	0%
10	520	3	Subsurface	Silver	1.26E+01					0.00E+00	0%
10	520	3	Subsurface	Total PAH	7.42E-02	6.72E-07	8.56E-07	1.42E-09		1.53E-06	5%
10	520	3	Subsurface	Uranium	1.85E+01					0.00E+00	0%
10	520	3	Subsurface	Uranium-238	1.34E+00	6.24E-07		1.87E-09	5.15E-07	1.14E-06	4%
10	**520**	**3**	**Subsurface**	**Totals**		**2.07E-05**	**6.57E-06**	**1.65E-06**	**5.15E-07**	**2.95E-05**	
10	**520**	**3**	**Subsurface**	**Percent**		**70%**	**22%**	**6%**	**2%**		
10	520	4	Subsurface	Arsenic	9.35E+00	1.74E-05	5.11E-06	1.18E-08		2.25E-05	52%
10	520	4	Subsurface	Beryllium	7.27E-01			5.09E-10		5.09E-10	0%
10	520	4	Subsurface	Cadmium	1.17E+00			6.16E-10		6.16E-10	0%
10	520	4	Subsurface	Chromium	6.60E+01			1.62E-06		1.62E-06	4%
10	520	4	Subsurface	Copper	1.10E+02					0.00E+00	0%
10	520	4	Subsurface	Iron	1.65E+04					0.00E+00	0%
10	520	4	Subsurface	Manganese	5.73E+02					0.00E+00	0%
10	520	4	Subsurface	Mercury	9.69E+00					0.00E+00	0%
10	520	4	Subsurface	Neptunium-237	7.40E-01	2.66E-07		1.95E-09	1.99E-06	2.26E-06	5%
10	520	4	Subsurface	Nickel	2.82E+02			2.14E-08		2.14E-08	0%
10	520	4	Subsurface	Silver	1.23E+01					0.00E+00	0%
10	520	4	Subsurface	Total PAH	5.52E-01	5.01E-06	6.37E-06	1.06E-08		1.14E-05	26%
10	520	4	Subsurface	Uranium	2.27E+01					0.00E+00	0%
10	520	4	Subsurface	Uranium-235	2.42E-01	8.76E-08		3.65E-10	4.44E-07	5.32E-07	1%
10	520	4	Subsurface	Uranium-238	6.26E+00	2.92E-06		8.73E-09	2.41E-06	5.34E-06	12%
10	520	4	Subsurface	Vanadium	4.43E+01					0.00E+00	0%
10	**520**	**4**	**Subsurface**	**Totals**		**2.57E-05**	**1.15E-05**	**1.67E-06**	**4.85E-06**	**4.37E-05**	
10	**520**	**4**	**Subsurface**	**Percent**		**59%**	**26%**	**4%**	**11%**		
10	520	5	Subsurface	Antimony	6.62E-01					0.00E+00	0%
10	520	5	Subsurface	Arsenic	9.97E+00	1.86E-05	5.45E-06	1.26E-08		2.40E-05	69%
10	520	5	Subsurface	Barium	1.38E+02					0.00E+00	0%
10	520	5	Subsurface	Beryllium	7.01E-01			4.91E-10		4.91E-10	0%
10	520	5	Subsurface	Chromium	4.94E+01			1.21E-06		1.21E-06	3%
10	520	5	Subsurface	Iron	1.70E+04					0.00E+00	0%
10	520	5	Subsurface	Manganese	5.45E+02					0.00E+00	0%
10	520	5	Subsurface	Mercury	6.94E+00					0.00E+00	0%
10	520	5	Subsurface	Neptunium-237	1.55E-01	5.57E-08		4.09E-10	4.17E-07	4.73E-07	1%
10	520	5	Subsurface	Nickel	1.12E+02			8.52E-09		8.52E-09	0%
10	520	5	Subsurface	Total PAH	3.87E-01	3.51E-06	4.47E-06	7.40E-09		7.98E-06	23%
10	520	5	Subsurface	Uranium-238	1.45E+00	6.76E-07		2.02E-09	5.59E-07	1.24E-06	4%
10	520	5	Subsurface	Vanadium	3.01E+01					0.00E+00	0%
10	**520**	**5**	**Subsurface**	**Totals**		**2.28E-05**	**9.92E-06**	**1.24E-06**	**9.75E-07**	**3.49E-05**	
10	**520**	**5**	**Subsurface**	**Percent**		**65%**	**28%**	**4%**	**3%**		
11	81	1	Subsurface	Aluminum	9.55E+03					0.00E+00	0%
11	81	1	Subsurface	Arsenic	1.11E+01	2.07E-05	6.08E-06	1.40E-08		2.68E-05	3%
11	81	1	Subsurface	Beryllium	6.98E-01			4.89E-10		4.89E-10	0%
11	81	1	Subsurface	Chromium	6.38E+01			1.56E-06		1.56E-06	0%
11	81	1	Subsurface	Cobalt	1.58E+01			4.15E-08		4.15E-08	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
11	81	1	Subsurface	Manganese	1.12E+03					0.00E+00	0%
11	81	1	Subsurface	Mercury	8.33E+00					0.00E+00	0%
11	81	1	Subsurface	Nickel	7.50E+01			5.69E-09		5.69E-09	0%
11	81	1	Subsurface	PCB, Total	1.60E+02	3.96E-04	5.43E-04	4.49E-05		9.85E-04	96%
11	81	1	Subsurface	Silver	2.70E+00					0.00E+00	0%
11	81	1	Subsurface	Thallium	3.49E-01					0.00E+00	0%
11	81	1	Subsurface	Total PAH	4.95E-01	4.49E-06	5.71E-06	9.46E-09		1.02E-05	1%
11	81	1	Subsurface	Uranium	6.50E+03					0.00E+00	0%
11	81	1	Subsurface	Uranium-238	2.29E+00	1.07E-06		3.19E-09	8.80E-07	1.95E-06	0%
11	**81**	**1**	**Subsurface**	**Totals**		**4.23E-04**	**5.55E-04**	**4.66E-05**	**8.80E-07**	**1.03E-03**	
11	**81**	**1**	**Subsurface**	**Percent**		**41%**	**54%**	**5%**	**0%**		
11	153	1	Subsurface	Arsenic	9.92E+00	1.85E-05	5.42E-06	1.25E-08		2.39E-05	78%
11	153	1	Subsurface	Chromium	6.59E+01			1.62E-06		1.62E-06	5%
11	153	1	Subsurface	Manganese	5.73E+02					0.00E+00	0%
11	153	1	Subsurface	Nickel	7.83E+01			5.95E-09		5.95E-09	0%
11	153	1	Subsurface	PCB, Total	6.00E-01	1.49E-06	2.04E-06	1.69E-07		3.70E-06	12%
11	153	1	Subsurface	Silver	1.32E+01					0.00E+00	0%
11	153	1	Subsurface	Total PAH	7.31E-02	6.62E-07	8.43E-07	1.40E-09		1.51E-06	5%
11	**153**	**1**	**Subsurface**	**Totals**		**2.06E-05**	**8.31E-06**	**1.81E-06**		**3.07E-05**	
11	**153**	**1**	**Subsurface**	**Percent**		**67%**	**27%**	**6%**			
11	156	1	Subsurface	Arsenic	1.11E+01	2.07E-05	6.07E-06	1.40E-08		2.68E-05	79%
11	156	1	Subsurface	Beryllium	1.00E+00			7.01E-10		7.01E-10	0%
11	156	1	Subsurface	Chromium	6.31E+01			1.55E-06		1.55E-06	5%
11	156	1	Subsurface	Cobalt	1.72E+01			4.52E-08		4.52E-08	0%
11	156	1	Subsurface	Manganese	2.83E+03					0.00E+00	0%
11	156	1	Subsurface	Mercury	9.87E+00					0.00E+00	0%
11	156	1	Subsurface	Nickel	6.16E+01			4.68E-09		4.68E-09	0%
11	156	1	Subsurface	PCB, Total	3.00E-01	7.45E-07	1.02E-06	8.44E-08		1.85E-06	5%
11	156	1	Subsurface	Silver	1.19E+01					0.00E+00	0%
11	156	1	Subsurface	Total PAH	8.26E-02	7.48E-07	9.53E-07	1.58E-09		1.70E-06	5%
11	156	1	Subsurface	Uranium	2.32E+01					0.00E+00	0%
11	156	1	Subsurface	Uranium-238	2.19E+00	1.02E-06		3.05E-09	8.44E-07	1.87E-06	6%
11	**156**	**1**	**Subsurface**	**Totals**		**2.32E-05**	**8.04E-06**	**1.70E-06**	**8.44E-07**	**3.38E-05**	
11	**156**	**1**	**Subsurface**	**Percent**		**69%**	**24%**	**5%**	**2%**		
11	160	1	Subsurface	Antimony	6.80E-01					0.00E+00	0%
11	160	1	Subsurface	Arsenic	8.22E+00	1.53E-05	4.50E-06	1.04E-08		1.98E-05	86%
11	160	1	Subsurface	Chromium	4.63E+01			1.13E-06		1.13E-06	5%
11	160	1	Subsurface	Silver	1.13E+01					0.00E+00	0%
11	160	1	Subsurface	Total PAH	1.02E-01	9.26E-07	1.18E-06	1.95E-09		2.11E-06	9%
11	**160**	**1**	**Subsurface**	**Totals**		**1.62E-05**	**5.67E-06**	**1.15E-06**		**2.31E-05**	
11	**160**	**1**	**Subsurface**	**Percent**		**70%**	**25%**	**5%**			
11	163	1	Subsurface	Arsenic	1.00E+01	1.86E-05	5.47E-06	1.26E-08		2.41E-05	87%
11	163	1	Subsurface	Chromium	5.89E+01			1.44E-06		1.44E-06	5%
11	163	1	Subsurface	Mercury	7.53E+00					0.00E+00	0%
11	163	1	Subsurface	Nickel	7.54E+01			5.72E-09		5.72E-09	0%
11	163	1	Subsurface	Silver	1.05E+01					0.00E+00	0%
11	163	1	Subsurface	Total PAH	1.07E-01	9.70E-07	1.23E-06	2.05E-09		2.21E-06	8%
11	163	1	Subsurface	Vanadium	3.21E+01					0.00E+00	0%
11	**163**	**1**	**Subsurface**	**Totals**		**1.96E-05**	**6.70E-06**	**1.46E-06**		**2.78E-05**	
11	**163**	**1**	**Subsurface**	**Percent**		**71%**	**24%**	**5%**			
11	219	1	Subsurface	Neptunium-237	3.31E-01	1.19E-07		8.74E-10	8.90E-07	1.01E-06	15%
11	219	1	Subsurface	Nickel	6.71E+01			5.10E-09		5.10E-09	0%
11	219	1	Subsurface	Total PAH	7.50E-02	6.80E-07	8.66E-07	1.43E-09		1.55E-06	23%
11	219	1	Subsurface	Uranium-235	1.92E-01	6.95E-08		2.89E-10	3.52E-07	4.22E-07	6%
11	219	1	Subsurface	Uranium-238	4.40E+00	2.05E-06		6.14E-09	1.69E-06	3.75E-06	56%
11	**219**	**1**	**Subsurface**	**Totals**		**2.92E-06**	**8.66E-07**	**1.38E-08**	**2.94E-06**	**6.74E-06**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.33. ELCR for the Excavation Worker/Outdoor Worker Exposed to Subsurface Soils (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
11	**219**	**1**	**Subsurface**	**Percent**		**43%**	**13%**	**0%**	**44%**		
11	488	1	Subsurface	Arsenic	8.89E+00	1.66E-05	4.86E-06	1.12E-08		2.14E-05	21%
11	488	1	Subsurface	Cesium-137	5.20E-01	5.00E-08		9.23E-13	4.46E-06	4.51E-06	5%
11	488	1	Subsurface	Chromium	5.31E+01			1.30E-06		1.30E-06	1%
11	488	1	Subsurface	PCB, Total	1.03E+01	2.56E-05	3.51E-05	2.90E-06		6.35E-05	63%
11	488	1	Subsurface	Total PAH	2.50E-01	2.26E-06	2.88E-06	4.78E-09		5.15E-06	5%
11	488	1	Subsurface	Uranium	1.48E+01					0.00E+00	0%
11	488	1	Subsurface	Uranium-235	1.49E-01	5.39E-08		2.25E-10	2.73E-07	3.28E-07	0%
11	488	1	Subsurface	Uranium-238	4.54E+00	2.12E-06		6.33E-09	1.75E-06	3.87E-06	4%
11	**488**	**1**	**Subsurface**	**Totals**		**4.66E-05**	**4.28E-05**	**4.22E-06**	**6.49E-06**	**1.00E-04**	
11	**488**	**1**	**Subsurface**	**Percent**		**47%**	**43%**	**4%**	**6%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	1	1	Surface	Beryllium	3.89E+00			7.16E-09		7.16E-09	0%
5	1	1	Surface	Cadmium	1.10E+00			1.52E-09		1.52E-09	0%
5	1	1	Surface	Cesium-137	5.91E-01	3.22E-08		1.59E-12	3.45E-05	3.46E-05	51%
5	1	1	Surface	Chromium	1.28E+01			8.25E-07		8.25E-07	1%
5	1	1	Surface	Neptunium-237	4.02E-01	8.21E-08		1.61E-09	7.36E-06	7.45E-06	11%
5	1	1	Surface	PCB, Total	1.76E-01	5.51E-07	2.08E-06	1.31E-07		2.76E-06	4%
5	1	1	Surface	Plutonium-239/240	6.14E+00	2.14E-06		4.62E-08	2.83E-08	2.21E-06	3%
5	1	1	Surface	Thorium-230	4.40E+01	1.12E-05		2.83E-07	8.30E-07	1.23E-05	18%
5	1	1	Surface	Uranium-235	1.06E-01	2.18E-08		2.42E-10	1.32E-06	1.35E-06	2%
5	1	1	Surface	Uranium-238	1.97E+00	5.22E-07		4.17E-09	5.18E-06	5.71E-06	8%
5	**1**	**1**	**Surface**	**Totals**		**1.45E-05**	**2.08E-06**	**1.30E-06**	**4.93E-05**	**6.72E-05**	
5	**1**	**1**	**Surface**	**Percent**		**22%**	**3%**	**2%**	**73%**		
5	1	2	Surface	Beryllium	8.23E+00			1.51E-08		1.51E-08	0%
5	1	2	Surface	Cadmium	6.46E+00			8.90E-09		8.90E-09	0%
5	1	2	Surface	Chromium	2.01E+02			1.29E-05		1.29E-05	3%
5	1	2	Surface	Copper	1.81E+02					0.00E+00	0%
5	1	2	Surface	Mercury	5.94E+00					0.00E+00	0%
5	1	2	Surface	Nickel	5.75E+01			1.14E-08		1.14E-08	0%
5	1	2	Surface	PCB, Total	3.21E+01	1.01E-04	3.79E-04	2.39E-05		5.03E-04	97%
5	1	2	Surface	Silver	3.31E+01					0.00E+00	0%
5	1	2	Surface	Thallium	3.70E-01					0.00E+00	0%
5	1	2	Surface	Vanadium	3.49E+01					0.00E+00	0%
5	**1**	**2**	**Surface**	**Totals**		**1.01E-04**	**3.79E-04**	**3.68E-05**		**5.16E-04**	
5	**1**	**2**	**Surface**	**Percent**		**19%**	**73%**	**7%**			
5	1	3	Surface	Chromium	1.45E+01			9.31E-07		9.31E-07	10%
5	1	3	Surface	PCB, Total	2.17E-01	6.79E-07	2.56E-06	1.61E-07		3.40E-06	36%
5	1	3	Surface	Uranium-238	1.73E+00	4.58E-07		3.65E-09	4.54E-06	5.00E-06	54%
5	**1**	**3**	**Surface**	**Totals**		**1.14E-06**	**2.56E-06**	**1.10E-06**	**4.54E-06**	**9.33E-06**	
5	**1**	**3**	**Surface**	**Percent**		**12%**	**27%**	**12%**	**49%**		
5	1	4	Surface	Beryllium	7.25E-01			1.33E-09		1.33E-09	0%
5	1	4	Surface	Chromium	9.30E+01			5.98E-06		5.98E-06	38%
5	1	4	Surface	Cobalt-60	2.20E-02	1.12E-09		1.78E-13	6.28E-06	6.28E-06	40%
5	1	4	Surface	Nickel	4.69E+01			9.33E-09		9.33E-09	0%
5	1	4	Surface	PCB, Total	1.30E-01	4.07E-07	1.53E-06	9.66E-08		2.04E-06	13%
5	1	4	Surface	Thorium-230	5.03E+00	1.28E-06		3.24E-08	9.48E-08	1.41E-06	9%
5	**1**	**4**	**Surface**	**Totals**		**1.69E-06**	**1.53E-06**	**6.12E-06**	**6.37E-06**	**1.57E-05**	
5	**1**	**4**	**Surface**	**Percent**		**11%**	**10%**	**39%**	**41%**		
5	1	5	Surface	Beryllium	8.30E+00			1.53E-08		1.53E-08	0%
5	1	5	Surface	Cadmium	1.20E+00			1.65E-09		1.65E-09	0%
5	1	5	Surface	Nickel	4.07E+01			8.10E-09		8.10E-09	0%
5	1	5	Surface	PCB, Total	2.70E-01	8.45E-07	3.18E-06	2.01E-07		4.23E-06	45%
5	1	5	Surface	Total PAH	9.83E-02	1.12E-06	3.93E-06	4.95E-09		5.06E-06	54%
5	**1**	**5**	**Surface**	**Totals**		**1.97E-06**	**7.11E-06**	**2.31E-07**		**9.31E-06**	
5	**1**	**5**	**Surface**	**Percent**		**21%**	**76%**	**2%**			
5	99	1	Surface	Chromium	5.51E+01			3.54E-06		3.54E-06	37%
5	99	1	Surface	Cobalt-60	1.19E-02	6.04E-10		9.62E-14	3.40E-06	3.40E-06	35%
5	99	1	Surface	Mercury	9.53E+00					0.00E+00	0%
5	99	1	Surface	Nickel	7.02E+01			1.40E-08		1.40E-08	0%
5	99	1	Surface	Silver	1.03E+01					0.00E+00	0%
5	99	1	Surface	Uranium-238	9.45E-01	2.50E-07		1.99E-09	2.48E-06	2.73E-06	28%
5	**99**	**1**	**Surface**	**Totals**		**2.51E-07**		**3.56E-06**	**5.88E-06**	**9.69E-06**	
5	**99**	**1**	**Surface**	**Percent**		**3%**		**37%**	**61%**		
5	194	1	Surface	Antimony	1.50E+00					0.00E+00	0%
5	194	1	Surface	Chromium	3.87E+01			2.49E-06		2.49E-06	100%
5	194	1	Surface	Mercury	6.71E+00					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	1	Surface	Nickel	5.84E+01			1.16E-08		1.16E-08	0%
5	194	1	Surface	Silver	1.09E+01					0.00E+00	0%
5	**194**	**1**	**Surface**	**Totals**				**2.50E-06**		**2.50E-06**	
5	**194**	**1**	**Surface**	**Percent**				**100%**			
5	194	2	Surface	Chromium	5.96E+01			3.83E-06		3.83E-06	48%
5	194	2	Surface	Silver	1.31E+01					0.00E+00	0%
5	194	2	Surface	Uranium	2.28E+01					0.00E+00	0%
5	194	2	Surface	Uranium-238	1.42E+00	3.76E-07		3.00E-09	3.73E-06	4.10E-06	52%
5	**194**	**2**	**Surface**	**Totals**		**3.76E-07**		**3.84E-06**	**3.73E-06**	**7.94E-06**	
5	**194**	**2**	**Surface**	**Percent**		**5%**		**48%**	**47%**		
5	194	3	Surface	Antimony	6.90E-01					0.00E+00	0%
5	194	3	Surface	Arsenic	1.46E+01	3.44E-05	2.77E-05	4.84E-08		6.22E-05	88%
5	194	3	Surface	Chromium	3.90E+01			2.51E-06		2.51E-06	4%
5	194	3	Surface	Nickel	6.40E+01			1.27E-08		1.27E-08	0%
5	194	3	Surface	Total PAH	3.93E-02	4.49E-07	1.57E-06	1.98E-09		2.02E-06	3%
5	194	3	Surface	Uranium-238	1.28E+00	3.40E-07		2.71E-09	3.37E-06	3.71E-06	5%
5	**194**	**3**	**Surface**	**Totals**		**3.52E-05**	**2.93E-05**	**2.57E-06**	**3.37E-06**	**7.04E-05**	
5	**194**	**3**	**Surface**	**Percent**		**50%**	**42%**	**4%**	**5%**		
5	194	4	Surface	Chromium	4.84E+01			3.11E-06		3.11E-06	26%
5	194	4	Surface	Mercury	8.92E+00					0.00E+00	0%
5	194	4	Surface	Nickel	6.91E+01			1.37E-08		1.37E-08	0%
5	194	4	Surface	Silver	1.18E+01					0.00E+00	0%
5	194	4	Surface	Total PAH	7.30E-02	8.34E-07	2.92E-06	3.67E-09		3.75E-06	32%
5	194	4	Surface	Uranium-238	1.73E+00	4.58E-07		3.65E-09	4.54E-06	5.00E-06	42%
5	**194**	**4**	**Surface**	**Totals**		**1.29E-06**	**2.92E-06**	**3.13E-06**	**4.54E-06**	**1.19E-05**	
5	**194**	**4**	**Surface**	**Percent**		**11%**	**25%**	**26%**	**38%**		
5	194	5	Surface	Chromium	4.58E+01			2.95E-06		2.95E-06	36%
5	194	5	Surface	Mercury	8.69E+00					0.00E+00	0%
5	194	5	Surface	Nickel	7.54E+01			1.50E-08		1.50E-08	0%
5	194	5	Surface	Silver	1.25E+01					0.00E+00	0%
5	194	5	Surface	Total PAH	2.37E-02	2.71E-07	9.47E-07	1.19E-09		1.22E-06	15%
5	194	5	Surface	Uranium-238	1.38E+00	3.65E-07		2.91E-09	3.62E-06	3.99E-06	49%
5	**194**	**5**	**Surface**	**Totals**		**6.36E-07**	**9.47E-07**	**2.96E-06**	**3.62E-06**	**8.17E-06**	
5	**194**	**5**	**Surface**	**Percent**		**8%**	**12%**	**36%**	**44%**		
5	194	6	Surface	Chromium	3.70E+01			2.38E-06		2.38E-06	38%
5	194	6	Surface	Manganese	1.08E+03					0.00E+00	0%
5	194	6	Surface	Nickel	8.06E+01			1.60E-08		1.60E-08	0%
5	194	6	Surface	Silver	9.89E+00					0.00E+00	0%
5	194	6	Surface	Uranium-238	1.32E+00	3.49E-07		2.79E-09	3.46E-06	3.82E-06	61%
5	**194**	**6**	**Surface**	**Totals**		**3.49E-07**		**2.40E-06**	**3.46E-06**	**6.21E-06**	
5	**194**	**6**	**Surface**	**Percent**		**6%**		**39%**	**56%**		
5	194	7	Surface	Chromium	5.32E+01			3.42E-06		3.42E-06	100%
5	194	7	Surface	Nickel	7.71E+01			1.54E-08		1.54E-08	0%
5	194	7	Surface	Silver	1.25E+01					0.00E+00	0%
5	**194**	**7**	**Surface**	**Totals**				**3.44E-06**		**3.44E-06**	
5	**194**	**7**	**Surface**	**Percent**				**100%**			
5	194	8	Surface	Bis(2-ethylhexyl)phthalate	1.50E+01	3.29E-07	8.84E-07	2.76E-11		1.21E-06	4%
5	194	8	Surface	Chromium	5.36E+01			3.45E-06		3.45E-06	10%
5	194	8	Surface	Manganese	8.00E+02					0.00E+00	0%
5	194	8	Surface	Total PAH	4.85E-01	5.54E-06	1.94E-05	2.44E-08		2.50E-05	74%
5	194	8	Surface	Uranium-238	1.39E+00	3.68E-07		2.93E-09	3.65E-06	4.02E-06	12%
5	**194**	**8**	**Surface**	**Totals**		**6.24E-06**	**2.03E-05**	**3.47E-06**	**3.65E-06**	**3.36E-05**	
5	**194**	**8**	**Surface**	**Percent**		**19%**	**60%**	**10%**	**11%**		
5	194	9	Surface	Arsenic	1.14E+01	2.68E-05	2.16E-05	3.77E-08		4.85E-05	94%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	9	Surface	Chromium	5.17E+01			3.32E-06		3.32E-06	6%
5	**194**	**9**	**Surface**	**Totals**		**2.68E-05**	**2.16E-05**	**3.36E-06**		**5.18E-05**	
5	**194**	**9**	**Surface**	**Percent**		**52%**	**42%**	**6%**			
5	194	10	Surface	Arsenic	1.22E+01	2.86E-05	2.30E-05	4.02E-08		5.16E-05	49%
5	194	10	Surface	Cesium-137	5.81E-01	3.17E-08		1.56E-12	3.40E-05	3.40E-05	32%
5	194	10	Surface	Chromium	3.63E+01			2.33E-06		2.33E-06	2%
5	194	10	Surface	Nickel	7.60E+01			1.51E-08		1.51E-08	0%
5	194	10	Surface	Total PAH	2.57E-01	2.94E-06	1.03E-05	1.29E-08		1.32E-05	13%
5	194	10	Surface	Uranium-238	1.49E+00	3.94E-07		3.14E-09	3.91E-06	4.31E-06	4%
5	**194**	**10**	**Surface**	**Totals**		**3.19E-05**	**3.33E-05**	**2.41E-06**	**3.79E-05**	**1.06E-04**	
5	**194**	**10**	**Surface**	**Percent**		**30%**	**32%**	**2%**	**36%**		
5	194	11	Surface	Chromium	3.27E+01			2.10E-06		2.10E-06	28%
5	194	11	Surface	Mercury	8.09E+00					0.00E+00	0%
5	194	11	Surface	Nickel	1.01E+02			2.00E-08		2.00E-08	0%
5	194	11	Surface	PCB, Total	8.40E-02	2.63E-07	9.91E-07	6.24E-08		1.32E-06	17%
5	194	11	Surface	Silver	1.33E+01					0.00E+00	0%
5	194	11	Surface	Total PAH	7.95E-02	9.09E-07	3.18E-06	4.00E-09		4.09E-06	54%
5	**194**	**11**	**Surface**	**Totals**		**1.17E-06**	**4.17E-06**	**2.19E-06**		**7.53E-06**	
5	**194**	**11**	**Surface**	**Percent**		**16%**	**55%**	**29%**			
5	194	12	Surface	Chromium	6.34E+01			4.07E-06		4.07E-06	8%
5	194	12	Surface	Nickel	7.86E+01			1.56E-08		1.56E-08	0%
5	194	12	Surface	Silver	1.20E+01					0.00E+00	0%
5	194	12	Surface	Total PAH	8.91E-01	1.02E-05	3.56E-05	4.49E-08		4.59E-05	92%
5	**194**	**12**	**Surface**	**Totals**		**1.02E-05**	**3.56E-05**	**4.14E-06**		**4.99E-05**	
5	**194**	**12**	**Surface**	**Percent**		**20%**	**71%**	**8%**			
5	194	13	Surface	Chromium	4.77E+01			3.06E-06		3.06E-06	39%
5	194	13	Surface	Nickel	6.03E+01			1.20E-08		1.20E-08	0%
5	194	13	Surface	Total PAH	9.13E-02	1.04E-06	3.65E-06	4.60E-09		4.70E-06	60%
5	**194**	**13**	**Surface**	**Totals**		**1.04E-06**	**3.65E-06**	**3.08E-06**		**7.78E-06**	
5	**194**	**13**	**Surface**	**Percent**		**13%**	**47%**	**40%**			
5	194	14	Surface	Chromium	5.21E+01			3.35E-06		3.35E-06	100%
5	194	14	Surface	Mercury	8.14E+00					0.00E+00	0%
5	**194**	**14**	**Surface**	**Totals**				**3.35E-06**		**3.35E-06**	
5	**194**	**14**	**Surface**	**Percent**				**100%**			
5	194	15	Surface	Chromium	5.33E+01			3.43E-06		3.43E-06	100%
5	194	15	Surface	Silver	1.03E+01					0.00E+00	0%
5	**194**	**15**	**Surface**	**Totals**				**3.43E-06**		**3.43E-06**	
5	**194**	**15**	**Surface**	**Percent**				**100%**			
5	194	16	Surface	Antimony	7.40E-01					0.00E+00	0%
5	194	16	Surface	Arsenic	1.15E+01	2.71E-05	2.18E-05	3.81E-08		4.89E-05	93%
5	194	16	Surface	Beryllium	8.70E-01			1.60E-09		1.60E-09	0%
5	194	16	Surface	Chromium	5.32E+01			3.42E-06		3.42E-06	7%
5	194	16	Surface	Nickel	7.20E+01			1.43E-08		1.43E-08	0%
5	194	16	Surface	Thallium	6.30E-01					0.00E+00	0%
5	194	16	Surface	Vanadium	4.11E+01					0.00E+00	0%
5	**194**	**16**	**Surface**	**Totals**		**2.71E-05**	**2.18E-05**	**3.48E-06**		**5.24E-05**	
5	**194**	**16**	**Surface**	**Percent**		**52%**	**42%**	**7%**			
5	194	17	Surface	Arsenic	1.16E+01	2.71E-05	2.19E-05	3.82E-08		4.90E-05	81%
5	194	17	Surface	Cadmium	1.10E+00			1.52E-09		1.52E-09	0%
5	194	17	Surface	Chromium	4.65E+01			2.99E-06		2.99E-06	5%
5	194	17	Surface	Total PAH	1.59E-01	1.81E-06	6.34E-06	7.99E-09		8.16E-06	14%
5	**194**	**17**	**Surface**	**Totals**		**2.89E-05**	**2.82E-05**	**3.04E-06**		**6.02E-05**	
5	**194**	**17**	**Surface**	**Percent**		**48%**	**47%**	**5%**			
5	194	18	Surface	Arsenic	1.06E+01	2.48E-05	2.00E-05	3.49E-08		4.49E-05	91%
5	194	18	Surface	Beryllium	7.40E-01			1.36E-09		1.36E-09	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	18	Surface	Chromium	6.85E+01			4.40E-06		4.40E-06	9%
5	194	18	Surface	Nickel	5.78E+01			1.15E-08		1.15E-08	0%
5	**194**	**18**	**Surface**	**Totals**		**2.48E-05**	**2.00E-05**	**4.45E-06**		**4.93E-05**	
5	**194**	**18**	**Surface**	**Percent**		**50%**	**41%**	**9%**			
5	194	19	Surface	Arsenic	1.07E+01	2.51E-05	2.03E-05	3.53E-08		4.54E-05	94%
5	194	19	Surface	Chromium	4.84E+01			3.11E-06		3.11E-06	6%
5	194	19	Surface	Nickel	5.84E+01			1.16E-08		1.16E-08	0%
5	**194**	**19**	**Surface**	**Totals**		**2.51E-05**	**2.03E-05**	**3.16E-06**		**4.85E-05**	
5	**194**	**19**	**Surface**	**Percent**		**52%**	**42%**	**7%**			
5	194	20	Surface	Arsenic	1.18E+01	2.78E-05	2.24E-05	3.91E-08		5.03E-05	91%
5	194	20	Surface	Barium	3.26E+02					0.00E+00	0%
5	194	20	Surface	Beryllium	1.10E+00			2.02E-09		2.02E-09	0%
5	194	20	Surface	Chromium	5.24E+01			3.37E-06		3.37E-06	6%
5	194	20	Surface	Cobalt	2.11E+01			1.45E-07		1.45E-07	0%
5	194	20	Surface	Manganese	2.29E+03					0.00E+00	0%
5	194	20	Surface	Mercury	7.28E+00					0.00E+00	0%
5	194	20	Surface	Nickel	6.57E+01			1.31E-08		1.31E-08	0%
5	194	20	Surface	Silver	1.22E+01					0.00E+00	0%
5	194	20	Surface	Total PAH	3.10E-02	3.54E-07	1.24E-06	1.56E-09		1.59E-06	3%
5	194	20	Surface	Vanadium	3.81E+01					0.00E+00	0%
5	**194**	**20**	**Surface**	**Totals**		**2.82E-05**	**2.37E-05**	**3.57E-06**		**5.54E-05**	
5	**194**	**20**	**Surface**	**Percent**		**51%**	**43%**	**6%**			
5	194	21	Surface	Antimony	9.30E-01					0.00E+00	0%
5	194	21	Surface	Chromium	5.51E+01			3.54E-06		3.54E-06	100%
5	194	21	Surface	Mercury	6.62E+00					0.00E+00	0%
5	194	21	Surface	Nickel	7.01E+01			1.40E-08		1.40E-08	0%
5	194	21	Surface	Thallium	6.40E-01					0.00E+00	0%
5	**194**	**21**	**Surface**	**Totals**				**3.56E-06**		**3.56E-06**	
5	**194**	**21**	**Surface**	**Percent**				**100%**			
5	194	22	Surface	Chromium	4.90E+01			3.15E-06		3.15E-06	2%
5	194	22	Surface	Manganese	8.19E+02					0.00E+00	0%
5	194	22	Surface	PCB, Total	1.09E+01	3.42E-05	1.29E-04	8.11E-06		1.71E-04	98%
5	**194**	**22**	**Surface**	**Totals**		**3.42E-05**	**1.29E-04**	**1.13E-05**		**1.74E-04**	
5	**194**	**22**	**Surface**	**Percent**		**20%**	**74%**	**6%**			
5	194	23	Surface	Arsenic	1.16E+01	2.71E-05	2.19E-05	3.82E-08		4.90E-05	92%
5	194	23	Surface	Chromium	6.60E+01			4.24E-06		4.24E-06	8%
5	194	23	Surface	Iron	1.83E+04					0.00E+00	0%
5	194	23	Surface	Nickel	8.77E+01			1.75E-08		1.75E-08	0%
5	194	23	Surface	Silver	1.15E+01					0.00E+00	0%
5	**194**	**23**	**Surface**	**Totals**		**2.71E-05**	**2.19E-05**	**4.30E-06**		**5.33E-05**	
5	**194**	**23**	**Surface**	**Percent**		**51%**	**41%**	**8%**			
5	194	24	Surface	Chromium	5.02E+01			3.23E-06		3.23E-06	73%
5	194	24	Surface	Nickel	7.08E+01			1.41E-08		1.41E-08	0%
5	194	24	Surface	Total PAH	2.28E-02	2.61E-07	9.11E-07	1.15E-09		1.17E-06	27%
5	**194**	**24**	**Surface**	**Totals**		**2.61E-07**	**9.11E-07**	**3.24E-06**		**4.42E-06**	
5	**194**	**24**	**Surface**	**Percent**		**6%**	**21%**	**73%**			
5	194	25	Surface	Barium	3.00E+02					0.00E+00	0%
5	194	25	Surface	Chromium	6.13E+01			3.94E-06		3.94E-06	79%
5	194	25	Surface	Manganese	9.96E+02					0.00E+00	0%
5	194	25	Surface	Nickel	6.33E+01			1.26E-08		1.26E-08	0%
5	194	25	Surface	Total PAH	2.06E-02	2.35E-07	8.23E-07	1.04E-09		1.06E-06	21%
5	**194**	**25**	**Surface**	**Totals**		**2.35E-07**	**8.23E-07**	**3.95E-06**		**5.01E-06**	
5	**194**	**25**	**Surface**	**Percent**		**5%**	**16%**	**79%**			
5	194	26	Surface	Beryllium	7.00E-01			1.29E-09		1.29E-09	0%
5	194	26	Surface	Chromium	4.18E+01			2.69E-06		2.69E-06	100%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	26	Surface	Silver	1.03E+01					0.00E+00	0%
5	194	26	Surface	Thallium	3.90E-01					0.00E+00	0%
5	**194**	**26**	**Surface**	**Totals**				**2.69E-06**		**2.69E-06**	
5	**194**	**26**	**Surface**	**Percent**				**100%**			
5	194	27	Surface	Chromium	5.22E+01			3.36E-06		3.36E-06	100%
5	194	27	Surface	Nickel	6.55E+01			1.30E-08		1.30E-08	0%
5	194	27	Surface	Silver	1.01E+01					0.00E+00	0%
5	**194**	**27**	**Surface**	**Totals**				**3.37E-06**		**3.37E-06**	
5	**194**	**27**	**Surface**	**Percent**				**100%**			
5	194	28	Surface	Arsenic	1.20E+01	2.83E-05	2.28E-05	3.97E-08		5.11E-05	93%
5	194	28	Surface	Beryllium	7.10E-01			1.30E-09		1.30E-09	0%
5	194	28	Surface	Chromium	6.07E+01			3.90E-06		3.90E-06	7%
5	194	28	Surface	Manganese	1.14E+03					0.00E+00	0%
5	194	28	Surface	Nickel	6.95E+01			1.38E-08		1.38E-08	0%
5	194	28	Surface	Silver	1.08E+01					0.00E+00	0%
5	194	28	Surface	Vanadium	4.06E+01					0.00E+00	0%
5	**194**	**28**	**Surface**	**Totals**		**2.83E-05**	**2.28E-05**	**3.96E-06**		**5.50E-05**	
5	**194**	**28**	**Surface**	**Percent**		**51%**	**41%**	**7%**			
5	194	29	Surface	Antimony	7.10E-01					0.00E+00	0%
5	194	29	Surface	Chromium	5.06E+01			3.25E-06		3.25E-06	100%
5	194	29	Surface	Nickel	6.51E+01			1.30E-08		1.30E-08	0%
5	194	29	Surface	Silver	9.77E+00					0.00E+00	0%
5	**194**	**29**	**Surface**	**Totals**				**3.26E-06**		**3.26E-06**	
5	**194**	**29**	**Surface**	**Percent**				**100%**			
5	194	30	Surface	Chromium	5.66E+01			3.64E-06		3.64E-06	100%
5	194	30	Surface	Mercury	8.80E+00					0.00E+00	0%
5	194	30	Surface	Nickel	6.99E+01			1.39E-08		1.39E-08	0%
5	194	30	Surface	Silver	9.76E+00					0.00E+00	0%
5	**194**	**30**	**Surface**	**Totals**				**3.65E-06**		**3.65E-06**	
5	**194**	**30**	**Surface**	**Percent**				**100%**			
5	194	31	Surface	Cesium-137	5.70E-01	3.11E-08		1.53E-12	3.33E-05	3.34E-05	87%
5	194	31	Surface	Uranium-238	1.72E+00	4.55E-07		3.63E-09	4.51E-06	4.97E-06	13%
5	**194**	**31**	**Surface**	**Totals**		**4.86E-07**		**3.63E-09**	**3.78E-05**	**3.83E-05**	
5	**194**	**31**	**Surface**	**Percent**		**1%**		**0%**	**99%**		
5	196	1	Surface	Antimony	5.90E-01					0.00E+00	0%
5	196	1	Surface	Chromium	1.96E+01			1.26E-06		1.26E-06	11%
5	196	1	Surface	Neptunium-237	3.11E-01	6.35E-08		1.24E-09	5.70E-06	5.76E-06	50%
5	196	1	Surface	Nickel	5.56E+02			1.11E-07		1.11E-07	1%
5	196	1	Surface	Uranium	2.33E+01					0.00E+00	0%
5	196	1	Surface	Uranium-238	1.54E+00	4.07E-07		3.25E-09	4.04E-06	4.45E-06	38%
5	**196**	**1**	**Surface**	**Totals**		**4.71E-07**		**1.38E-06**	**9.74E-06**	**1.16E-05**	
5	**196**	**1**	**Surface**	**Percent**		**4%**		**12%**	**84%**		
5	196	2	Surface	Barium	2.02E+02					0.00E+00	0%
5	196	2	Surface	Cadmium	2.53E+00			3.49E-09		3.49E-09	0%
5	196	2	Surface	Chromium	2.07E+01			1.33E-06		1.33E-06	2%
5	196	2	Surface	Nickel	7.36E+01			1.47E-08		1.47E-08	0%
5	196	2	Surface	PCB, Total	1.51E+00	4.73E-06	1.78E-05	1.12E-06		2.37E-05	36%
5	196	2	Surface	Total PAH	6.80E-01	7.77E-06	2.72E-05	3.42E-08		3.50E-05	53%
5	196	2	Surface	Uranium-238	2.21E+00	5.85E-07		4.66E-09	5.80E-06	6.39E-06	10%
5	**196**	**2**	**Surface**	**Totals**		**1.31E-05**	**4.50E-05**	**2.51E-06**	**5.80E-06**	**6.64E-05**	
5	**196**	**2**	**Surface**	**Percent**		**20%**	**68%**	**4%**	**9%**		
5	489	1	Surface	Chromium	4.16E+01			2.68E-06		2.68E-06	24%
5	489	1	Surface	Nickel	7.88E+01			1.57E-08		1.57E-08	0%
5	489	1	Surface	Total PAH	8.22E-02	9.39E-07	3.28E-06	4.14E-09		4.23E-06	38%
5	489	1	Surface	Uranium-238	1.47E+00	3.89E-07		3.10E-09	3.86E-06	4.25E-06	38%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	**489**	**1**	**Surface**	**Totals**		**1.33E-06**	**3.28E-06**	**2.70E-06**	**3.86E-06**	**1.12E-05**	
5	**489**	**1**	**Surface**	**Percent**		**12%**	**29%**	**24%**	**35%**		
5	531	1	Surface	Antimony	1.00E+00					0.00E+00	0%
5	531	1	Surface	Arsenic	4.68E+01	1.10E-04	8.87E-05	1.55E-07		1.99E-04	92%
5	531	1	Surface	Cadmium	3.10E+00			4.27E-09		4.27E-09	0%
5	531	1	Surface	Chromium	5.05E+01			3.24E-06		3.24E-06	1%
5	531	1	Surface	Iron	5.68E+04					0.00E+00	0%
5	531	1	Surface	Nickel	1.62E+02			3.23E-08		3.23E-08	0%
5	531	1	Surface	Total PAH	5.34E-02	6.10E-07	2.13E-06	2.69E-09		2.75E-06	1%
5	531	1	Surface	Uranium	2.41E+01					0.00E+00	0%
5	531	1	Surface	Uranium-235	1.38E-01	2.83E-08		3.15E-10	1.72E-06	1.75E-06	1%
5	531	1	Surface	Uranium-238	3.48E+00	9.21E-07		7.34E-09	9.13E-06	1.01E-05	5%
5	531	1	Surface	Zinc	2.45E+03					0.00E+00	0%
5	**531**	**1**	**Surface**	**Totals**		**1.12E-04**	**9.09E-05**	**3.45E-06**	**1.09E-05**	**2.17E-04**	
5	**531**	**1**	**Surface**	**Percent**		**51%**	**42%**	**2%**	**5%**		
6	200	1	Surface	Antimony	5.60E-01					0.00E+00	0%
6	200	1	Surface	Cesium-137	5.74E-01	3.13E-08		1.54E-12	3.36E-05	3.36E-05	37%
6	200	1	Surface	Chromium	5.75E+01			3.70E-06		3.70E-06	4%
6	200	1	Surface	Mercury	6.71E+00					0.00E+00	0%
6	200	1	Surface	Nickel	1.28E+02			2.55E-08		2.55E-08	0%
6	200	1	Surface	PCB, Total	2.60E+00	8.14E-06	3.07E-05	1.93E-06		4.07E-05	44%
6	200	1	Surface	Total PAH	2.84E-02	3.25E-07	1.14E-06	1.43E-09		1.46E-06	2%
6	200	1	Surface	Uranium	2.73E+01					0.00E+00	0%
6	200	1	Surface	Uranium-235	1.43E-01	2.94E-08		3.26E-10	1.79E-06	1.82E-06	2%
6	200	1	Surface	Uranium-238	3.58E+00	9.46E-07		7.55E-09	9.38E-06	1.03E-05	11%
6	**200**	**1**	**Surface**	**Totals**		**9.47E-06**	**3.18E-05**	**5.67E-06**	**4.47E-05**	**9.17E-05**	
6	**200**	**1**	**Surface**	**Percent**		**10%**	**35%**	**6%**	**49%**		
6	212	1	Surface	Arsenic	1.44E+01	3.39E-05	2.73E-05	4.76E-08		6.12E-05	23%
6	212	1	Surface	Beryllium	8.10E-01			1.49E-09		1.49E-09	0%
6	212	1	Surface	Cesium-137	6.01E-01	3.28E-08		1.61E-12	3.51E-05	3.52E-05	13%
6	212	1	Surface	Chromium	3.58E+01			2.30E-06		2.30E-06	1%
6	212	1	Surface	Cobalt-60	8.76E-03	4.45E-10		7.08E-14	2.50E-06	2.50E-06	1%
6	212	1	Surface	Iron	4.14E+04					0.00E+00	0%
6	212	1	Surface	Neptunium-237	4.00E+00	8.16E-07		1.60E-08	7.33E-05	7.41E-05	28%
6	212	1	Surface	Nickel	8.69E+01			1.73E-08		1.73E-08	0%
6	212	1	Surface	PCB, Total	1.80E-01	5.64E-07	2.12E-06	1.34E-07		2.82E-06	1%
6	212	1	Surface	Plutonium-239/240	6.71E+00	2.33E-06		5.04E-08	3.09E-08	2.41E-06	1%
6	212	1	Surface	Thorium-230	2.60E+02	6.62E-05		1.67E-06	4.90E-06	7.27E-05	27%
6	212	1	Surface	Uranium	2.30E+01					0.00E+00	0%
6	212	1	Surface	Uranium-235	2.09E-01	4.29E-08		4.76E-10	2.61E-06	2.66E-06	1%
6	212	1	Surface	Uranium-238	3.17E+00	8.39E-07		6.69E-09	8.32E-06	9.16E-06	3%
6	**212**	**1**	**Surface**	**Totals**		**1.05E-04**	**2.94E-05**	**4.25E-06**	**1.27E-04**	**2.65E-04**	
6	**212**	**1**	**Surface**	**Percent**		**39%**	**11%**	**2%**	**48%**		
6	213	1	Surface	Antimony	8.50E-01					0.00E+00	0%
6	213	1	Surface	Chromium	4.78E+01			3.07E-06		3.07E-06	16%
6	213	1	Surface	Nickel	6.67E+01			1.33E-08		1.33E-08	0%
6	213	1	Surface	PCB, Total	7.30E-02	2.29E-07	8.61E-07	5.42E-08		1.14E-06	6%
6	213	1	Surface	Silver	1.32E+01					0.00E+00	0%
6	213	1	Surface	Total PAH	1.72E-01	1.96E-06	6.87E-06	8.65E-09		8.84E-06	45%
6	213	1	Surface	Uranium-238	2.33E+00	6.17E-07		4.92E-09	6.11E-06	6.73E-06	34%
6	**213**	**1**	**Surface**	**Totals**		**2.81E-06**	**7.73E-06**	**3.16E-06**	**6.11E-06**	**1.98E-05**	
6	**213**	**1**	**Surface**	**Percent**		**14%**	**39%**	**16%**	**31%**		
6	213	2	Surface	Chromium	4.48E+01			2.88E-06		2.88E-06	99%
6	213	2	Surface	Nickel	9.10E+01			1.81E-08		1.81E-08	1%
6	213	2	Surface	Silver	1.13E+01					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	**213**	**2**	**Surface**	**Totals**				**2.90E-06**		**2.90E-06**	
6	**213**	**2**	**Surface**	**Percent**				**100%**			
6	214	1	Surface	Antimony	5.70E-01					0.00E+00	
6	**214**	**1**	**Surface**	**Totals**						**0.00E+00**	
6	**214**	**1**	**Surface**	**Percent**							
6	215	1	Surface	Antimony	6.80E-01					0.00E+00	0%
6	215	1	Surface	Chromium	5.73E+01			3.69E-06		3.69E-06	47%
6	215	1	Surface	Iron	3.87E+04					0.00E+00	0%
6	215	1	Surface	Nickel	7.32E+01			1.46E-08		1.46E-08	0%
6	215	1	Surface	Total PAH	8.09E-02	9.24E-07	3.23E-06	4.07E-09		4.16E-06	53%
6	**215**	**1**	**Surface**	**Totals**		**9.24E-07**	**3.23E-06**	**3.71E-06**		**7.86E-06**	
6	**215**	**1**	**Surface**	**Percent**		**12%**	**41%**	**47%**			
6	216	1	Surface	Chromium	2.38E+01			1.53E-06		1.53E-06	12%
6	216	1	Surface	Total PAH	1.49E-01	1.71E-06	5.97E-06	7.52E-09		7.68E-06	59%
6	216	1	Surface	Uranium-238	1.33E+00	3.52E-07		2.81E-09	3.49E-06	3.84E-06	29%
6	**216**	**1**	**Surface**	**Totals**		**2.06E-06**	**5.97E-06**	**1.54E-06**	**3.49E-06**	**1.31E-05**	
6	**216**	**1**	**Surface**	**Percent**		**16%**	**46%**	**12%**	**27%**		
6	217	1	Surface	Chromium	8.58E+01			5.51E-06		5.51E-06	61%
6	217	1	Surface	Cobalt	1.96E+01			1.35E-07		1.35E-07	1%
6	217	1	Surface	Manganese	7.70E+02					0.00E+00	0%
6	217	1	Surface	Nickel	8.54E+01			1.70E-08		1.70E-08	0%
6	217	1	Surface	Silver	1.35E+01					0.00E+00	0%
6	217	1	Surface	Uranium-238	1.15E+00	3.05E-07		2.44E-09	3.03E-06	3.34E-06	37%
6	**217**	**1**	**Surface**	**Totals**		**3.05E-07**		**5.67E-06**	**3.03E-06**	**9.00E-06**	
6	**217**	**1**	**Surface**	**Percent**		**3%**		**63%**	**34%**		
6	217	2	Surface	Antimony	1.70E+00					0.00E+00	0%
6	217	2	Surface	Arsenic	1.12E+01	2.62E-05	2.11E-05	3.69E-08		4.74E-05	59%
6	217	2	Surface	Chromium	1.02E+02			6.53E-06		6.53E-06	8%
6	217	2	Surface	Cobalt	1.74E+01			1.20E-07		1.20E-07	0%
6	217	2	Surface	Iron	3.09E+04					0.00E+00	0%
6	217	2	Surface	Manganese	8.44E+02					0.00E+00	0%
6	217	2	Surface	Mercury	8.59E+00					0.00E+00	0%
6	217	2	Surface	Nickel	9.74E+01			1.94E-08		1.94E-08	0%
6	217	2	Surface	Silver	1.61E+01					0.00E+00	0%
6	217	2	Surface	Total PAH	5.05E-01	5.77E-06	2.02E-05	2.54E-08		2.60E-05	32%
6	**217**	**2**	**Surface**	**Totals**		**3.20E-05**	**4.13E-05**	**6.74E-06**		**8.00E-05**	
6	**217**	**2**	**Surface**	**Percent**		**40%**	**52%**	**8%**			
6	221	1	Surface	Barium	2.21E+02					0.00E+00	0%
6	221	1	Surface	Chromium	7.01E+01			4.51E-06		4.51E-06	6%
6	221	1	Surface	Iron	1.90E+04					0.00E+00	0%
6	221	1	Surface	Nickel	7.93E+01			1.58E-08		1.58E-08	0%
6	221	1	Surface	PCB, Total	5.00E-01	1.57E-06	5.90E-06	3.71E-07		7.83E-06	11%
6	221	1	Surface	Total PAH	1.02E+00	1.17E-05	4.09E-05	5.15E-08		5.26E-05	75%
6	221	1	Surface	Uranium	1.64E+01					0.00E+00	0%
6	221	1	Surface	Uranium-238	1.93E+00	5.11E-07		4.07E-09	5.06E-06	5.58E-06	8%
6	**221**	**1**	**Surface**	**Totals**		**1.38E-05**	**4.68E-05**	**4.95E-06**	**5.06E-06**	**7.05E-05**	
6	**221**	**1**	**Surface**	**Percent**		**20%**	**66%**	**7%**	**7%**		
6	222	1	Surface	Chromium	4.73E+01			3.04E-06		3.04E-06	3%
6	222	1	Surface	Nickel	9.19E+01			1.83E-08		1.83E-08	0%
6	222	1	Surface	PCB, Total	1.40E+00	4.38E-06	1.65E-05	1.04E-06		2.19E-05	22%
6	222	1	Surface	Total PAH	1.77E-01	2.02E-06	7.08E-06	8.92E-09		9.11E-06	9%
6	222	1	Surface	Uranium	2.80E+01					0.00E+00	0%
6	222	1	Surface	Uranium-234	1.04E+01	2.07E-06		2.68E-08	6.03E-08	2.16E-06	2%
6	222	1	Surface	Uranium-235	7.10E-01	1.46E-07		1.62E-09	8.87E-06	9.02E-06	9%
6	222	1	Surface	Uranium-238	1.96E+01	5.19E-06		4.14E-08	5.14E-05	5.66E-05	56%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	**222**	**1**	**Surface**	**Totals**		**1.38E-05**	**2.36E-05**	**4.18E-06**	**6.04E-05**	**1.02E-04**	
6	**222**	**1**	**Surface**	**Percent**		**14%**	**23%**	**4%**	**59%**		
6	227	1	Surface	Beryllium	5.52E-01			1.01E-09		1.01E-09	0%
6	227	1	Surface	Cesium-137	1.90E-01	1.04E-08		5.10E-13	1.11E-05	1.11E-05	4%
6	227	1	Surface	Chromium	4.71E+01			3.03E-06		3.03E-06	1%
6	227	1	Surface	Cobalt-60	1.53E-02	7.77E-10		1.24E-13	4.37E-06	4.37E-06	2%
6	227	1	Surface	Neptunium-237	9.05E-01	1.85E-07		3.62E-09	1.66E-05	1.68E-05	6%
6	227	1	Surface	Nickel	2.03E+02			4.04E-08		4.04E-08	0%
6	227	1	Surface	PCB, Total	4.14E+00	1.30E-05	4.89E-05	3.08E-06		6.49E-05	24%
6	227	1	Surface	Technetium-99	4.77E+01	4.61E-07		1.52E-10	8.94E-08	5.50E-07	0%
6	227	1	Surface	Total PAH	3.38E-01	3.86E-06	1.35E-05	1.70E-08		1.74E-05	6%
6	227	1	Surface	Uranium	1.02E+02					0.00E+00	0%
6	227	1	Surface	Uranium-234	1.54E+01	3.07E-06		3.97E-08	8.95E-08	3.20E-06	1%
6	227	1	Surface	Uranium-235	1.49E+00	3.06E-07		3.40E-09	1.86E-05	1.89E-05	7%
6	227	1	Surface	Uranium-238	4.63E+01	1.22E-05		9.77E-08	1.21E-04	1.34E-04	49%
6	**227**	**1**	**Surface**	**Totals**		**3.31E-05**	**6.24E-05**	**6.31E-06**	**1.72E-04**	**2.74E-04**	
6	**227**	**1**	**Surface**	**Percent**		**12%**	**23%**	**2%**	**63%**		
6	227	2	Surface	Beryllium	5.32E-01			9.78E-10		9.78E-10	0%
6	227	2	Surface	Chromium	5.63E+01			3.62E-06		3.62E-06	3%
6	227	2	Surface	Cobalt	8.99E+00			6.19E-08		6.19E-08	0%
6	227	2	Surface	Cobalt-60	1.37E-02	6.96E-10		1.11E-13	3.91E-06	3.91E-06	4%
6	227	2	Surface	Mercury	8.41E+00					0.00E+00	0%
6	227	2	Surface	Nickel	1.25E+02			2.49E-08		2.49E-08	0%
6	227	2	Surface	PCB, Total	5.82E+00	1.82E-05	6.86E-05	4.32E-06		9.12E-05	83%
6	227	2	Surface	Total PAH	1.16E-01	1.32E-06	4.62E-06	5.82E-09		5.95E-06	5%
6	227	2	Surface	Uranium	1.51E+01					0.00E+00	0%
6	227	2	Surface	Uranium-238	1.57E+00	4.16E-07		3.32E-09	4.13E-06	4.55E-06	4%
6	**227**	**2**	**Surface**	**Totals**		**2.00E-05**	**7.33E-05**	**8.04E-06**	**8.04E-06**	**1.09E-04**	
6	**227**	**2**	**Surface**	**Percent**		**18%**	**67%**	**7%**	**7%**		
6	228	1	Surface	Antimony	6.30E-01					0.00E+00	0%
6	228	1	Surface	Cadmium	3.90E+00			5.37E-09		5.37E-09	0%
6	228	1	Surface	Chromium	1.89E+02			1.21E-05		1.21E-05	28%
6	228	1	Surface	Mercury	9.37E+00					0.00E+00	0%
6	228	1	Surface	Neptunium-237	8.00E-01	1.63E-07		3.20E-09	1.47E-05	1.48E-05	34%
6	228	1	Surface	Nickel	7.92E+01			1.58E-08		1.58E-08	0%
6	228	1	Surface	Silver	1.16E+01					0.00E+00	0%
6	228	1	Surface	Total PAH	6.69E-02	7.64E-07	2.67E-06	3.37E-09		3.44E-06	8%
6	228	1	Surface	Uranium	1.51E+01					0.00E+00	0%
6	228	1	Surface	Uranium-235	1.78E-01	3.66E-08		4.06E-10	2.22E-06	2.26E-06	5%
6	228	1	Surface	Uranium-238	3.77E+00	9.98E-07		7.96E-09	9.89E-06	1.09E-05	25%
6	**228**	**1**	**Surface**	**Totals**		**1.96E-06**	**2.67E-06**	**1.22E-05**	**2.68E-05**	**4.36E-05**	
6	**228**	**1**	**Surface**	**Percent**		**5%**	**6%**	**28%**	**61%**		
7	76	1	Surface	Barium	2.69E+02					0.00E+00	0%
7	76	1	Surface	PCB, Total	2.60E-01	8.14E-07	3.07E-06	1.93E-07		4.07E-06	4%
7	76	1	Surface	Total PAH	1.76E+00	2.01E-05	7.03E-05	8.85E-08		9.04E-05	92%
7	76	1	Surface	Uranium-238	1.45E+00	3.84E-07		3.06E-09	3.80E-06	4.19E-06	4%
7	**76**	**1**	**Surface**	**Totals**		**2.13E-05**	**7.33E-05**	**2.85E-07**	**3.80E-06**	**9.87E-05**	
7	**76**	**1**	**Surface**	**Percent**		**22%**	**74%**	**0%**	**4%**		
7	165	1	Surface	Antimony	2.20E+00					0.00E+00	0%
7	165	1	Surface	Arsenic	6.35E+01	1.49E-04	1.20E-04	2.10E-07		2.70E-04	29%
7	165	1	Surface	Barium	5.84E+02					0.00E+00	0%
7	165	1	Surface	Beryllium	6.82E-01			1.25E-09		1.25E-09	0%
7	165	1	Surface	Cesium-137	3.47E+00	1.89E-07		9.32E-12	2.03E-04	2.03E-04	22%
7	165	1	Surface	Chromium	3.74E+01			2.40E-06		2.40E-06	0%
7	165	1	Surface	Mercury	3.78E-01					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
7	165	1	Surface	Naphthalene	1.61E+00			1.41E-06		1.41E-06	0%
7	165	1	Surface	Neptunium-237	4.26E-01	8.70E-08		1.70E-09	7.80E-06	7.89E-06	1%
7	165	1	Surface	Nickel	3.47E+01			6.91E-09		6.91E-09	0%
7	165	1	Surface	PCB, Total	8.27E+00	2.59E-05	9.75E-05	6.14E-06		1.30E-04	14%
7	165	1	Surface	Plutonium-239/240	2.81E+00	9.75E-07		2.11E-08	1.29E-08	1.01E-06	0%
7	165	1	Surface	Silver	3.09E+01					0.00E+00	0%
7	165	1	Surface	Thorium-230	6.02E+00	1.53E-06		3.87E-08	1.13E-07	1.68E-06	0%
7	165	1	Surface	Total PAH	1.87E+00	2.14E-05	7.47E-05	9.40E-08		9.61E-05	10%
7	165	1	Surface	Uranium	1.08E+02					0.00E+00	0%
7	165	1	Surface	Uranium-234	5.76E+01	1.15E-05		1.48E-07	3.34E-07	1.19E-05	1%
7	165	1	Surface	Uranium-235	2.05E+00	4.20E-07		4.66E-09	2.56E-05	2.60E-05	3%
7	165	1	Surface	Uranium-238	6.41E+01	1.70E-05		1.35E-07	1.68E-04	1.85E-04	20%
7	**165**	**1**	**Surface**	**Totals**		**2.28E-04**	**2.93E-04**	**1.06E-05**	**4.05E-04**	**9.36E-04**	
7	**165**	**1**	**Surface**	**Percent**		**24%**	**31%**	**1%**	**43%**		
7	170	1	Surface	Neptunium-237	1.15E-01	2.35E-08		4.59E-10	2.11E-06	2.13E-06	33%
7	170	1	Surface	Uranium-238	1.53E+00	4.05E-07		3.23E-09	4.01E-06	4.42E-06	67%
7	**170**	**1**	**Surface**	**Totals**		**4.28E-07**		**3.69E-09**	**6.12E-06**	**6.55E-06**	
7	**170**	**1**	**Surface**	**Percent**		**7%**		**0%**	**93%**		
8	158	1	Surface	Antimony	5.23E-01					0.00E+00	0%
8	158	1	Surface	Arsenic	1.01E+01	2.38E-05	1.92E-05	3.34E-08		4.30E-05	54%
8	158	1	Surface	Barium	2.19E+02					0.00E+00	0%
8	158	1	Surface	Chromium	6.07E+01			3.91E-06		3.91E-06	5%
8	158	1	Surface	Cobalt	1.62E+01			1.12E-07		1.12E-07	0%
8	158	1	Surface	Manganese	9.91E+02					0.00E+00	0%
8	158	1	Surface	Mercury	1.05E+01					0.00E+00	0%
8	158	1	Surface	Nickel	7.28E+01			1.45E-08		1.45E-08	0%
8	158	1	Surface	Thallium	3.12E-01					0.00E+00	0%
8	158	1	Surface	Total PAH	3.69E-01	4.22E-06	1.47E-05	1.86E-08		1.90E-05	24%
8	158	1	Surface	Uranium	2.03E+01					0.00E+00	0%
8	158	1	Surface	Uranium-235	1.63E-01	3.35E-08		3.72E-10	2.04E-06	2.07E-06	3%
8	158	1	Surface	Uranium-238	3.79E+00	1.00E-06		8.00E-09	9.94E-06	1.10E-05	14%
8	**158**	**1**	**Surface**	**Totals**		**2.90E-05**	**3.39E-05**	**4.09E-06**	**1.20E-05**	**7.90E-05**	
8	**158**	**1**	**Surface**	**Percent**		**37%**	**43%**	**5%**	**15%**		
8	169	1	Surface	Aluminum	1.42E+04					0.00E+00	0%
8	169	1	Surface	Antimony	1.30E+00					0.00E+00	0%
8	169	1	Surface	Arsenic	2.03E+01	4.77E-05	3.85E-05	6.71E-08		8.62E-05	16%
8	169	1	Surface	Beryllium	8.00E-01			1.47E-09		1.47E-09	0%
8	169	1	Surface	Chromium	2.15E+02			1.38E-05		1.38E-05	3%
8	169	1	Surface	Copper	3.74E+02					0.00E+00	0%
8	169	1	Surface	Iron	4.16E+04					0.00E+00	0%
8	169	1	Surface	Mercury	7.87E+00					0.00E+00	0%
8	169	1	Surface	Nickel	5.49E+02			1.09E-07		1.09E-07	0%
8	169	1	Surface	PCB, Total	1.00E+01	3.13E-05	1.18E-04	7.43E-06		1.57E-04	30%
8	169	1	Surface	Thallium	4.60E-01					0.00E+00	0%
8	169	1	Surface	Total PAH	4.59E+00	5.24E-05	1.83E-04	2.31E-07		2.36E-04	45%
8	169	1	Surface	Uranium	5.03E+01					0.00E+00	0%
8	169	1	Surface	Uranium-234	6.55E+00	1.30E-06		1.69E-08	3.80E-08	1.36E-06	0%
8	169	1	Surface	Uranium-235	4.60E-01	9.45E-08		1.05E-09	5.75E-06	5.84E-06	1%
8	169	1	Surface	Uranium-238	8.12E+00	2.15E-06		1.71E-08	2.13E-05	2.35E-05	4%
8	**169**	**1**	**Surface**	**Totals**		**1.35E-04**	**3.40E-04**	**2.17E-05**	**2.71E-05**	**5.23E-04**	
8	**169**	**1**	**Surface**	**Percent**		**26%**	**65%**	**4%**	**5%**		
9	19	1	Surface	Beryllium	1.10E+00			2.02E-09		2.02E-09	0%
9	19	1	Surface	Cadmium	1.20E+00			1.65E-09		1.65E-09	0%
9	19	1	Surface	Thallium	9.80E-01					0.00E+00	0%
9	19	1	Surface	Total PAH	5.23E+00	5.97E-05	2.09E-04	2.63E-07		2.69E-04	100%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**19**	**1**	**Surface**	**Totals**		**5.97E-05**	**2.09E-04**	**2.67E-07**		**2.69E-04**	
9	**19**	**1**	**Surface**	**Percent**		**22%**	**78%**	**0%**			
9	138	1	Surface	Antimony	5.39E+00					0.00E+00	0%
9	138	1	Surface	Arsenic	1.06E+01	2.49E-05	2.01E-05	3.51E-08		4.51E-05	73%
9	138	1	Surface	Cadmium	5.42E+00			7.47E-09		7.47E-09	0%
9	138	1	Surface	Chromium	5.39E+01			3.46E-06		3.46E-06	6%
9	138	1	Surface	Mercury	1.30E+01					0.00E+00	0%
9	138	1	Surface	Nickel	7.04E+01			1.40E-08		1.40E-08	0%
9	138	1	Surface	PCB, Total	5.00E-01	1.57E-06	5.90E-06	3.71E-07		7.83E-06	13%
9	138	1	Surface	Silver	1.01E+01					0.00E+00	0%
9	138	1	Surface	Total PAH	9.74E-02	1.11E-06	3.89E-06	4.90E-09		5.01E-06	8%
9	**138**	**1**	**Surface**	**Totals**		**2.76E-05**	**2.99E-05**	**3.90E-06**		**6.14E-05**	
9	**138**	**1**	**Surface**	**Percent**		**45%**	**49%**	**6%**			
9	138	2	Surface	Nickel	7.99E+01			1.59E-08		1.59E-08	0%
9	138	2	Surface	PCB, Total	9.20E-02	2.88E-07	1.08E-06	6.83E-08		1.44E-06	42%
9	138	2	Surface	Silver	1.04E+01					0.00E+00	0%
9	138	2	Surface	Total PAH	3.84E-02	4.39E-07	1.53E-06	1.93E-09		1.98E-06	58%
9	**138**	**2**	**Surface**	**Totals**		**7.27E-07**	**2.62E-06**	**8.62E-08**		**3.43E-06**	
9	**138**	**2**	**Surface**	**Percent**		**21%**	**76%**	**3%**			
9	180	1	Surface	Antimony	5.80E-01					0.00E+00	0%
9	180	1	Surface	Arsenic	7.48E+01	1.76E-04	1.42E-04	2.47E-07		3.18E-04	99%
9	180	1	Surface	Chromium	5.54E+01			3.57E-06		3.57E-06	1%
9	180	1	Surface	Mercury	8.28E+00					0.00E+00	0%
9	180	1	Surface	Nickel	8.77E+01			1.75E-08		1.75E-08	0%
9	**180**	**1**	**Surface**	**Totals**		**1.76E-04**	**1.42E-04**	**3.83E-06**		**3.21E-04**	
9	**180**	**1**	**Surface**	**Percent**		**55%**	**44%**	**1%**			
9	180	2	Surface	Antimony	4.58E-01					0.00E+00	0%
9	180	2	Surface	Arsenic	1.27E+01	2.97E-05	2.40E-05	4.18E-08		5.37E-05	88%
9	180	2	Surface	Chromium	4.46E+01			2.87E-06		2.87E-06	5%
9	180	2	Surface	Nickel	8.42E+01			1.68E-08		1.68E-08	0%
9	180	2	Surface	Total PAH	9.19E-02	1.05E-06	3.67E-06	4.62E-09		4.73E-06	8%
9	**180**	**2**	**Surface**	**Totals**		**3.08E-05**	**2.76E-05**	**2.93E-06**		**6.13E-05**	
9	**180**	**2**	**Surface**	**Percent**		**50%**	**45%**	**5%**			
9	180	3	Surface	Arsenic	1.34E+01	3.14E-05	2.53E-05	4.41E-08		5.67E-05	95%
9	180	3	Surface	Chromium	4.69E+01			3.02E-06		3.02E-06	5%
9	180	3	Surface	Nickel	6.77E+01			1.35E-08		1.35E-08	0%
9	180	3	Surface	Silver	1.14E+01					0.00E+00	0%
9	**180**	**3**	**Surface**	**Totals**		**3.14E-05**	**2.53E-05**	**3.08E-06**		**5.97E-05**	
9	**180**	**3**	**Surface**	**Percent**		**52%**	**42%**	**5%**			
9	180	4	Surface	Arsenic	1.15E+01	2.71E-05	2.19E-05	3.81E-08		4.90E-05	91%
9	180	4	Surface	Barium	2.13E+02					0.00E+00	0%
9	180	4	Surface	Beryllium	1.60E+00			2.94E-09		2.94E-09	0%
9	180	4	Surface	Chromium	6.00E+01			3.86E-06		3.86E-06	7%
9	180	4	Surface	Iron	1.54E+04					0.00E+00	0%
9	180	4	Surface	Manganese	7.09E+02					0.00E+00	0%
9	180	4	Surface	Nickel	6.46E+01			1.29E-08		1.29E-08	0%
9	180	4	Surface	Silver	9.68E+00					0.00E+00	0%
9	180	4	Surface	Total PAH	2.15E-02	2.46E-07	8.59E-07	1.08E-09		1.11E-06	2%
9	180	4	Surface	Vanadium	4.85E+01					0.00E+00	0%
9	**180**	**4**	**Surface**	**Totals**		**2.73E-05**	**2.27E-05**	**3.91E-06**		**5.39E-05**	
9	**180**	**4**	**Surface**	**Percent**		**51%**	**42%**	**7%**			
9	181	1	Surface	Chromium	2.29E+01			1.47E-06		1.47E-06	45%
9	181	1	Surface	Thallium	3.50E+00					0.00E+00	0%
9	181	1	Surface	Total PAH	3.43E-02	3.92E-07	1.37E-06	1.73E-09		1.76E-06	55%
9	**181**	**1**	**Surface**	**Totals**		**3.92E-07**	**1.37E-06**	**1.47E-06**		**3.23E-06**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**181**	**1**	**Surface**	**Percent**		**12%**	**42%**	**45%**			
9	195	1	Surface	Chromium	6.33E+01			4.07E-06		4.07E-06	100%
9	195	1	Surface	Nickel	7.02E+01			1.40E-08		1.40E-08	0%
9	195	1	Surface	Silver	9.37E+00					0.00E+00	0%
9	**195**	**1**	**Surface**	**Totals**				**4.08E-06**		**4.08E-06**	
9	**195**	**1**	**Surface**	**Percent**				**100%**			
9	195	2	Surface	Chromium	4.52E+01			2.91E-06		2.91E-06	68%
9	195	2	Surface	Silver	9.48E+00					0.00E+00	0%
9	195	2	Surface	Total PAH	2.68E-02	3.06E-07	1.07E-06	1.35E-09		1.38E-06	32%
9	**195**	**2**	**Surface**	**Totals**		**3.06E-07**	**1.07E-06**	**2.91E-06**		**4.29E-06**	
9	**195**	**2**	**Surface**	**Percent**		**7%**	**25%**	**68%**			
9	195	3	Surface	Chromium	5.03E+01			3.23E-06		3.23E-06	61%
9	195	3	Surface	Nickel	5.22E+01			1.04E-08		1.04E-08	0%
9	195	3	Surface	Total PAH	4.06E-02	4.64E-07	1.62E-06	2.04E-09		2.09E-06	39%
9	**195**	**3**	**Surface**	**Totals**		**4.64E-07**	**1.62E-06**	**3.25E-06**		**5.33E-06**	
9	**195**	**3**	**Surface**	**Percent**		**9%**	**30%**	**61%**			
9	195	4	Surface	Chromium	5.29E+01			3.40E-06		3.40E-06	100%
9	195	4	Surface	Nickel	6.23E+01			1.24E-08		1.24E-08	0%
9	**195**	**4**	**Surface**	**Totals**				**3.41E-06**		**3.41E-06**	
9	**195**	**4**	**Surface**	**Percent**				**100%**			
9	195	5	Surface	Chromium	5.74E+01			3.69E-06		3.69E-06	75%
9	195	5	Surface	Nickel	8.11E+01			1.61E-08		1.61E-08	0%
9	195	5	Surface	Total PAH	2.40E-02	2.74E-07	9.59E-07	1.21E-09		1.23E-06	25%
9	**195**	**5**	**Surface**	**Totals**		**2.74E-07**	**9.59E-07**	**3.71E-06**		**4.94E-06**	
9	**195**	**5**	**Surface**	**Percent**		**6%**	**19%**	**75%**			
9	195	6	Surface	Chromium	4.45E+01			2.86E-06		2.86E-06	18%
9	195	6	Surface	Nickel	8.71E+01			1.73E-08		1.73E-08	0%
9	195	6	Surface	Total PAH	2.48E-01	2.83E-06	9.90E-06	1.25E-08		1.27E-05	82%
9	**195**	**6**	**Surface**	**Totals**		**2.83E-06**	**9.90E-06**	**2.89E-06**		**1.56E-05**	
9	**195**	**6**	**Surface**	**Percent**		**18%**	**63%**	**19%**			
9	195	7	Surface	Chromium	4.93E+01			3.17E-06		3.17E-06	100%
9	195	7	Surface	Silver	8.06E+00					0.00E+00	0%
9	**195**	**7**	**Surface**	**Totals**				**3.17E-06**		**3.17E-06**	
9	**195**	**7**	**Surface**	**Percent**				**100%**			
9	195	8	Surface	Arsenic	1.16E+01	2.71E-05	2.19E-05	3.82E-08		4.91E-05	76%
9	195	8	Surface	Beryllium	7.40E-01			1.36E-09		1.36E-09	0%
9	195	8	Surface	Chromium	6.79E+01			4.37E-06		4.37E-06	7%
9	195	8	Surface	Cobalt	1.82E+01			1.25E-07		1.25E-07	0%
9	195	8	Surface	Nickel	7.01E+01			1.40E-08		1.40E-08	0%
9	195	8	Surface	Total PAH	2.16E-01	2.46E-06	8.62E-06	1.09E-08		1.11E-05	17%
9	195	8	Surface	Vanadium	4.04E+01					0.00E+00	0%
9	**195**	**8**	**Surface**	**Totals**		**2.96E-05**	**3.05E-05**	**4.56E-06**		**6.47E-05**	
9	**195**	**8**	**Surface**	**Percent**		**46%**	**47%**	**7%**			
9	195	9	Surface	Chromium	6.08E+01			3.91E-06		3.91E-06	100%
9	195	9	Surface	Nickel	7.93E+01			1.58E-08		1.58E-08	0%
9	**195**	**9**	**Surface**	**Totals**				**3.93E-06**		**3.93E-06**	
9	**195**	**9**	**Surface**	**Percent**				**100%**			
9	195	10	Surface	Chromium	4.51E+01			2.90E-06		2.90E-06	99%
9	195	10	Surface	Nickel	7.40E+01			1.47E-08		1.47E-08	1%
9	195	10	Surface	Silver	1.31E+01					0.00E+00	0%
9	**195**	**10**	**Surface**	**Totals**				**2.91E-06**		**2.91E-06**	
9	**195**	**10**	**Surface**	**Percent**				**100%**			
9	195	11	Surface	Aluminum	2.81E+04					0.00E+00	0%
9	195	11	Surface	Arsenic	1.35E+01	3.16E-05	2.55E-05	4.45E-08		5.72E-05	94%
9	195	11	Surface	Barium	4.53E+02					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	195	11	Surface	Chromium	5.05E+01			3.25E-06		3.25E-06	5%
9	195	11	Surface	Cobalt	2.77E+01			1.91E-07		1.91E-07	0%
9	195	11	Surface	Iron	1.97E+04					0.00E+00	0%
9	195	11	Surface	Nickel	6.77E+01			1.35E-08		1.35E-08	0%
9	195	11	Surface	Thallium	6.60E-01					0.00E+00	0%
9	195	11	Surface	Vanadium	7.97E+01					0.00E+00	0%
9	**195**	**11**	**Surface**	**Totals**		**3.16E-05**	**2.55E-05**	**3.50E-06**		**6.06E-05**	
9	**195**	**11**	**Surface**	**Percent**		**52%**	**42%**	**6%**			
9	195	12	Surface	Beryllium	7.50E-01			1.38E-09		1.38E-09	0%
9	195	12	Surface	Chromium	7.04E+01			4.53E-06		4.53E-06	100%
9	195	12	Surface	Nickel	6.78E+01			1.35E-08		1.35E-08	0%
9	**195**	**12**	**Surface**	**Totals**				**4.54E-06**		**4.54E-06**	
9	**195**	**12**	**Surface**	**Percent**				**100%**			
9	195	13	Surface	Chromium	6.55E+01			4.21E-06		4.21E-06	100%
9	195	13	Surface	Nickel	6.91E+01			1.37E-08		1.37E-08	0%
9	**195**	**13**	**Surface**	**Totals**				**4.23E-06**		**4.23E-06**	
9	**195**	**13**	**Surface**	**Percent**				**100%**			
9	195	14	Surface	Chromium	5.94E+01			3.82E-06		3.82E-06	100%
9	195	14	Surface	Nickel	7.04E+01			1.40E-08		1.40E-08	0%
9	**195**	**14**	**Surface**	**Totals**				**3.84E-06**		**3.84E-06**	
9	**195**	**14**	**Surface**	**Percent**				**100%**			
9	195	15	Surface	Chromium	4.82E+01			3.10E-06		3.10E-06	100%
9	**195**	**15**	**Surface**	**Totals**				**3.10E-06**		**3.10E-06**	
9	**195**	**15**	**Surface**	**Percent**				**100%**			
9	195	16	Surface	Chromium	4.45E+01			2.86E-06		2.86E-06	99%
9	195	16	Surface	Nickel	8.16E+01			1.62E-08		1.62E-08	1%
9	**195**	**16**	**Surface**	**Totals**				**2.88E-06**		**2.88E-06**	
9	**195**	**16**	**Surface**	**Percent**				**100%**			
9	195	17	Surface	Chromium	8.22E+01			5.28E-06		5.28E-06	13%
9	195	17	Surface	Mercury	4.17E-01					0.00E+00	0%
9	195	17	Surface	Nickel	5.93E+01			1.18E-08		1.18E-08	0%
9	195	17	Surface	PCB, Total	7.40E-01	2.32E-06	8.73E-06	5.50E-07		1.16E-05	28%
9	195	17	Surface	Silver	1.01E+01					0.00E+00	0%
9	195	17	Surface	Thallium	5.40E-01					0.00E+00	0%
9	195	17	Surface	Total PAH	3.16E-01	3.61E-06	1.26E-05	1.59E-08		1.63E-05	39%
9	195	17	Surface	Uranium-235	1.32E-01	2.71E-08		3.01E-10	1.65E-06	1.68E-06	4%
9	195	17	Surface	Uranium-238	2.48E+00	6.56E-07		5.23E-09	6.51E-06	7.17E-06	17%
9	**195**	**17**	**Surface**	**Totals**		**6.61E-06**	**2.14E-05**	**5.87E-06**	**8.16E-06**	**4.20E-05**	
9	**195**	**17**	**Surface**	**Percent**		**16%**	**51%**	**14%**	**19%**		
9	486	1	Surface	Cesium-137	1.71E+00	9.33E-08		4.59E-12	1.00E-04	1.00E-04	100%
9	**486**	**1**	**Surface**	**Totals**		**9.33E-08**		**4.59E-12**	**1.00E-04**	**1.00E-04**	
9	**486**	**1**	**Surface**	**Percent**		**0%**		**0%**	**100%**		
9	487	1	Surface	Cesium-137	1.38E+00	7.53E-08		3.71E-12	8.07E-05	8.07E-05	100%
9	**487**	**1**	**Surface**	**Totals**		**7.53E-08**		**3.71E-12**	**8.07E-05**	**8.07E-05**	
9	**487**	**1**	**Surface**	**Percent**		**0%**		**0%**	**100%**		
9	492	1	Surface	Arsenic	1.47E+01	3.45E-05	2.79E-05	4.86E-08		6.24E-05	3%
9	492	1	Surface	Beryllium	1.04E+01			1.91E-08		1.91E-08	0%
9	492	1	Surface	Cadmium	3.14E+00			4.33E-09		4.33E-09	0%
9	492	1	Surface	Chromium	1.04E+03			6.69E-05		6.69E-05	3%
9	492	1	Surface	Cobalt-60	9.63E-03	4.89E-10		7.78E-14	2.75E-06	2.75E-06	0%
9	492	1	Surface	Neptunium-237	2.09E-01	4.27E-08		8.35E-10	3.83E-06	3.87E-06	0%
9	492	1	Surface	PCB, Total	4.41E+01	1.38E-04	5.20E-04	3.28E-05		6.91E-04	34%
9	492	1	Surface	Uranium	1.77E+03					0.00E+00	0%
9	492	1	Surface	Uranium-234	5.39E+01	1.07E-05		1.39E-07	3.13E-07	1.12E-05	1%
9	492	1	Surface	Uranium-235	5.72E+00	1.17E-06		1.30E-08	7.15E-05	7.27E-05	4%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	492	1	Surface	Uranium-238	3.83E+02	1.01E-04		8.08E-07	1.00E-03	1.11E-03	55%
9	492	1	Surface	Vanadium	4.32E+01					0.00E+00	0%
9	**492**	**1**	**Surface**	**Totals**		**2.86E-04**	**5.48E-04**	**1.01E-04**	**1.08E-03**	**2.02E-03**	
9	**492**	**1**	**Surface**	**Percent**		**14%**	**27%**	**5%**	**54%**		
9	493	1	Surface	Aluminum	1.44E+04					0.00E+00	0%
9	493	1	Surface	Barium	4.04E+02					0.00E+00	0%
9	493	1	Surface	Beryllium	9.91E-01			1.82E-09		1.82E-09	0%
9	493	1	Surface	Chromium	6.61E+01			4.25E-06		4.25E-06	7%
9	493	1	Surface	Cobalt	3.79E+01			2.61E-07		2.61E-07	0%
9	493	1	Surface	Cobalt-60	1.36E-02	6.91E-10		1.10E-13	3.88E-06	3.88E-06	7%
9	493	1	Surface	Manganese	3.55E+03					0.00E+00	0%
9	493	1	Surface	Mercury	2.60E-01					0.00E+00	0%
9	493	1	Surface	Neptunium-237	1.22E-01	2.49E-08		4.87E-10	2.23E-06	2.26E-06	4%
9	493	1	Surface	Nickel	2.13E+02			4.24E-08		4.24E-08	0%
9	493	1	Surface	PCB, Total	2.60E-01	8.14E-07	3.07E-06	1.93E-07		4.07E-06	7%
9	493	1	Surface	Total PAH	5.00E-01	5.71E-06	2.00E-05	2.52E-08		2.57E-05	44%
9	493	1	Surface	Uranium-235	1.65E-01	3.39E-08		3.76E-10	2.06E-06	2.10E-06	4%
9	493	1	Surface	Uranium-238	5.50E+00	1.46E-06		1.16E-08	1.44E-05	1.59E-05	27%
9	493	1	Surface	Vanadium	4.05E+01					0.00E+00	0%
9	**493**	**1**	**Surface**	**Totals**		**8.04E-06**	**2.30E-05**	**4.79E-06**	**2.26E-05**	**5.85E-05**	
9	**493**	**1**	**Surface**	**Percent**		**14%**	**39%**	**8%**	**39%**		
9	517	1	Surface	Beryllium	7.39E-01			1.36E-09		1.36E-09	0%
9	517	1	Surface	Chromium	4.91E+01			3.16E-06		3.16E-06	7%
9	517	1	Surface	Cobalt-60	6.39E-03	3.24E-10		5.16E-14	1.82E-06	1.82E-06	4%
9	517	1	Surface	Neptunium-237	1.07E+00	2.18E-07		4.27E-09	1.96E-05	1.98E-05	43%
9	517	1	Surface	Nickel	1.72E+02			3.42E-08		3.42E-08	0%
9	517	1	Surface	PCB, Total	5.00E-01	1.57E-06	5.90E-06	3.71E-07		7.83E-06	17%
9	517	1	Surface	Uranium-235	1.60E-01	3.29E-08		3.65E-10	2.00E-06	2.03E-06	4%
9	517	1	Surface	Uranium-238	3.89E+00	1.03E-06		8.21E-09	1.02E-05	1.12E-05	24%
9	**517**	**1**	**Surface**	**Totals**		**2.85E-06**	**5.90E-06**	**3.58E-06**	**3.36E-05**	**4.59E-05**	
9	**517**	**1**	**Surface**	**Percent**		**6%**	**13%**	**8%**	**73%**		
9	541	1	Surface	Aluminum	1.43E+04					0.00E+00	0%
9	541	1	Surface	Americium-241	7.53E+00	2.06E-06		4.78E-08	4.78E-06	6.89E-06	0%
9	541	1	Surface	Barium	1.28E+02					0.00E+00	0%
9	541	1	Surface	Beryllium	6.98E-01			1.28E-09		1.28E-09	0%
9	541	1	Surface	Cadmium	1.68E+00			2.32E-09		2.32E-09	0%
9	541	1	Surface	Cesium-137	9.58E-01	5.23E-08		2.57E-12	5.60E-05	5.61E-05	1%
9	541	1	Surface	Chromium	8.24E+02			5.30E-05		5.30E-05	1%
9	541	1	Surface	Cobalt-60	1.01E-02	5.13E-10		8.16E-14	2.88E-06	2.88E-06	0%
9	541	1	Surface	Iron	1.60E+04					0.00E+00	0%
9	541	1	Surface	Mercury	9.81E-02					0.00E+00	0%
9	541	1	Surface	Naphthalene	6.55E-01			5.72E-07		5.72E-07	0%
9	541	1	Surface	Neptunium-237	5.52E-02	1.13E-08		2.21E-10	1.01E-06	1.02E-06	0%
9	541	1	Surface	Nickel	1.52E+01			3.03E-09		3.03E-09	0%
9	541	1	Surface	PCB, Total	6.06E+01	1.90E-04	7.15E-04	4.50E-05		9.50E-04	22%
9	541	1	Surface	Total PAH	2.33E+00	2.66E-05	9.31E-05	1.17E-07		1.20E-04	3%
9	541	1	Surface	Uranium	6.38E+03					0.00E+00	0%
9	541	1	Surface	Uranium-234	1.43E+02	2.84E-05		3.68E-07	8.29E-07	2.96E-05	1%
9	541	1	Surface	Uranium-235	1.76E+01	3.61E-06		4.00E-08	2.19E-04	2.23E-04	5%
9	541	1	Surface	Uranium-238	1.00E+03	2.65E-04		2.11E-06	2.63E-03	2.89E-03	67%
9	541	1	Surface	Vanadium	3.04E+01					0.00E+00	0%
9	**541**	**1**	**Surface**	**Totals**		**5.15E-04**	**8.08E-04**	**1.01E-04**	**2.91E-03**	**4.34E-03**	
9	**541**	**1**	**Surface**	**Percent**		**12%**	**19%**	**2%**	**67%**		
9	561	1	Surface	Antimony	9.36E-01					0.00E+00	0%
9	561	1	Surface	Arsenic	1.66E+01	3.89E-05	3.14E-05	5.47E-08		7.03E-05	15%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	561	1	Surface	Barium	1.40E+02					0.00E+00	0%
9	561	1	Surface	Beryllium	6.85E-01			1.26E-09		1.26E-09	0%
9	561	1	Surface	Chromium	8.58E+01			5.52E-06		5.52E-06	1%
9	561	1	Surface	Cobalt	1.07E+01			7.37E-08		7.37E-08	0%
9	561	1	Surface	Cobalt-60	7.06E-02	3.58E-09		5.70E-13	2.01E-05	2.02E-05	4%
9	561	1	Surface	Iron	2.05E+04					0.00E+00	0%
9	561	1	Surface	Manganese	1.61E+03					0.00E+00	0%
9	561	1	Surface	Neptunium-237	2.71E-02	5.53E-09		1.08E-10	4.96E-07	5.02E-07	0%
9	561	1	Surface	PCB, Total	1.04E+00	3.26E-06	1.23E-05	7.74E-07		1.63E-05	4%
9	561	1	Surface	Thallium	3.33E-01					0.00E+00	0%
9	561	1	Surface	Total PAH	3.94E-01	4.50E-06	1.57E-05	1.98E-08		2.03E-05	4%
9	561	1	Surface	Uranium	2.65E+02					0.00E+00	0%
9	561	1	Surface	Uranium-234	7.84E+00	1.56E-06		2.02E-08	4.55E-08	1.63E-06	0%
9	561	1	Surface	Uranium-235	1.37E+00	2.81E-07		3.11E-09	1.71E-05	1.74E-05	4%
9	561	1	Surface	Uranium-238	1.07E+02	2.82E-05		2.25E-07	2.79E-04	3.08E-04	67%
9	561	1	Surface	Vanadium	3.76E+01					0.00E+00	0%
9	**561**	**1**	**Surface**	**Totals**		**7.67E-05**	**5.94E-05**	**6.69E-06**	**3.17E-04**	**4.60E-04**	
9	**561**	**1**	**Surface**	**Percent**		**17%**	**13%**	**1%**	**69%**		
9	561	2	Surface	Antimony	5.33E+00					0.00E+00	0%
9	561	2	Surface	Arsenic	1.30E+01	3.06E-05	2.47E-05	4.30E-08		5.53E-05	3%
9	561	2	Surface	Beryllium	6.34E-01			1.16E-09		1.16E-09	0%
9	561	2	Surface	Cadmium	4.13E-01			5.69E-10		5.69E-10	0%
9	561	2	Surface	Cesium-137	4.09E-01	2.23E-08		1.10E-12	2.39E-05	2.39E-05	1%
9	561	2	Surface	Chromium	2.88E+02			1.85E-05		1.85E-05	1%
9	561	2	Surface	Cobalt	1.14E+01			7.86E-08		7.86E-08	0%
9	561	2	Surface	Cobalt-60	2.76E-02	1.40E-09		2.23E-13	7.88E-06	7.88E-06	0%
9	561	2	Surface	Manganese	1.12E+03					0.00E+00	0%
9	561	2	Surface	Neptunium-237	4.71E-02	9.61E-09		1.88E-10	8.63E-07	8.73E-07	0%
9	561	2	Surface	PCB, Total	1.64E+01	5.14E-05	1.94E-04	1.22E-05		2.57E-04	15%
9	561	2	Surface	Thallium	4.09E-01					0.00E+00	0%
9	561	2	Surface	Total PAH	2.43E+00	2.78E-05	9.71E-05	1.22E-07		1.25E-04	7%
9	561	2	Surface	Uranium	1.38E+03					0.00E+00	0%
9	561	2	Surface	Uranium-234	4.06E+01	8.09E-06		1.05E-07	2.36E-07	8.43E-06	0%
9	561	2	Surface	Uranium-235	7.09E+00	1.46E-06		1.62E-08	8.86E-05	9.01E-05	5%
9	561	2	Surface	Uranium-238	4.00E+02	1.06E-04		8.45E-07	1.05E-03	1.16E-03	66%
9	561	2	Surface	Vanadium	3.46E+01					0.00E+00	0%
9	**561**	**2**	**Surface**	**Totals**		**2.25E-04**	**3.15E-04**	**3.19E-05**	**1.17E-03**	**1.74E-03**	
9	**561**	**2**	**Surface**	**Percent**		**13%**	**18%**	**2%**	**67%**		
9	562	1	Surface	Uranium	8.73E+01					0.00E+00	0%
9	562	1	Surface	Uranium-238	2.73E+00	7.22E-07		5.76E-09	7.16E-06	7.89E-06	100%
9	**562**	**1**	**Surface**	**Totals**		**7.22E-07**		**5.76E-09**	**7.16E-06**	**7.89E-06**	
9	**562**	**1**	**Surface**	**Percent**		**9%**		**0%**	**91%**		
9	562	2	Surface	PCB, Total	1.58E+00	4.95E-06	1.86E-05	1.17E-06		2.48E-05	1%
9	562	2	Surface	Uranium-234	5.34E+01	1.06E-05		1.37E-07	3.10E-07	1.11E-05	1%
9	562	2	Surface	Uranium-235	8.96E+00	1.84E-06		2.04E-08	1.12E-04	1.14E-04	6%
9	562	2	Surface	Uranium-238	5.81E+02	1.54E-04		1.23E-06	1.52E-03	1.68E-03	92%
9	**562**	**2**	**Surface**	**Totals**		**1.71E-04**	**1.86E-05**	**2.56E-06**	**1.64E-03**	**1.83E-03**	
9	**562**	**2**	**Surface**	**Percent**		**9%**	**1%**	**0%**	**89%**		
9	562	3	Surface	Chromium	3.82E+01			2.45E-06		2.45E-06	5%
9	562	3	Surface	PCB, Total	2.40E-01	7.51E-07	2.83E-06	1.78E-07		3.76E-06	7%
9	562	3	Surface	Total PAH	2.20E-01	2.51E-06	8.79E-06	1.11E-08		1.13E-05	22%
9	562	3	Surface	Uranium	5.89E+01					0.00E+00	0%
9	562	3	Surface	Uranium-235	1.63E-01	3.35E-08		3.72E-10	2.04E-06	2.07E-06	4%
9	562	3	Surface	Uranium-238	1.09E+01	2.88E-06		2.30E-08	2.86E-05	3.15E-05	62%
9	**562**	**3**	**Surface**	**Totals**		**6.18E-06**	**1.16E-05**	**2.67E-06**	**3.06E-05**	**5.11E-05**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**562**	**3**	**Surface**	**Percent**		**12%**	**23%**	**5%**	**60%**		
9	562	4	Surface	Chromium	4.67E+01			3.00E-06		3.00E-06	32%
9	562	4	Surface	Uranium	2.10E+01					0.00E+00	0%
9	562	4	Surface	Uranium-238	2.24E+00	5.93E-07		4.73E-09	5.88E-06	6.47E-06	68%
9	**562**	**4**	**Surface**	**Totals**		**5.93E-07**		**3.01E-06**	**5.88E-06**	**9.48E-06**	
9	**562**	**4**	**Surface**	**Percent**		**6%**		**32%**	**62%**		
9	562	5	Surface	Chromium	1.53E+02			9.85E-06		9.85E-06	4%
9	562	5	Surface	PCB, Total	9.50E-01	2.97E-06	1.12E-05	7.06E-07		1.49E-05	7%
9	562	5	Surface	Total PAH	7.05E-02	8.06E-07	2.82E-06	3.55E-09		3.63E-06	2%
9	562	5	Surface	Uranium	2.08E+02					0.00E+00	0%
9	562	5	Surface	Uranium-234	8.57E+00	1.71E-06		2.21E-08	4.97E-08	1.78E-06	1%
9	562	5	Surface	Uranium-235	9.50E-01	1.95E-07		2.17E-09	1.19E-05	1.21E-05	5%
9	562	5	Surface	Uranium-238	6.24E+01	1.65E-05		1.32E-07	1.64E-04	1.80E-04	81%
9	**562**	**5**	**Surface**	**Totals**		**2.22E-05**	**1.40E-05**	**1.07E-05**	**1.76E-04**	**2.23E-04**	
9	**562**	**5**	**Surface**	**Percent**		**10%**	**6%**	**5%**	**79%**		
9	562	6	Surface	Uranium-234	4.01E+01	7.98E-06		1.03E-07	2.33E-07	8.32E-06	1%
9	562	6	Surface	Uranium-235	6.81E+00	1.40E-06		1.55E-08	8.51E-05	8.65E-05	8%
9	562	6	Surface	Uranium-238	3.62E+02	9.57E-05		7.63E-07	9.49E-04	1.05E-03	92%
9	**562**	**6**	**Surface**	**Totals**		**1.05E-04**		**8.82E-07**	**1.03E-03**	**1.14E-03**	
9	**562**	**6**	**Surface**	**Percent**		**9%**		**0%**	**91%**		
9	563	1	Surface	Cadmium	8.96E-01			1.23E-09		1.23E-09	0%
9	563	1	Surface	Chromium	2.85E+02			1.83E-05		1.83E-05	48%
9	563	1	Surface	PCB, Total	7.40E-01	2.32E-06	8.73E-06	5.50E-07		1.16E-05	31%
9	563	1	Surface	Uranium	1.51E+01					0.00E+00	0%
9	563	1	Surface	Uranium-238	2.76E+00	7.30E-07		5.82E-09	7.24E-06	7.98E-06	21%
9	**563**	**1**	**Surface**	**Totals**		**3.05E-06**	**8.73E-06**	**1.89E-05**	**7.24E-06**	**3.79E-05**	
9	**563**	**1**	**Surface**	**Percent**		**8%**	**23%**	**50%**	**19%**		
9	563	2	Surface	Cesium-137	6.47E-01	3.53E-08		1.74E-12	3.78E-05	3.79E-05	90%
9	563	2	Surface	Uranium-238	1.49E+00	3.94E-07		3.14E-09	3.91E-06	4.31E-06	10%
9	**563**	**2**	**Surface**	**Totals**		**4.30E-07**		**3.15E-09**	**4.17E-05**	**4.22E-05**	
9	**563**	**2**	**Surface**	**Percent**		**1%**		**0%**	**99%**		
9	564	1	Surface	Arsenic	4.30E+01	1.01E-04	8.15E-05	1.42E-07		1.83E-04	64%
9	564	1	Surface	Beryllium	2.12E+00			3.90E-09		3.90E-09	0%
9	564	1	Surface	Cadmium	1.96E+00			2.70E-09		2.70E-09	0%
9	564	1	Surface	Cesium-137	6.20E-01	3.38E-08		1.67E-12	3.62E-05	3.63E-05	13%
9	564	1	Surface	Chromium	7.49E+01			4.82E-06		4.82E-06	2%
9	564	1	Surface	Iron	3.66E+04					0.00E+00	0%
9	564	1	Surface	Mercury	2.30E-01					0.00E+00	0%
9	564	1	Surface	Nickel	2.24E+01			4.46E-09		4.46E-09	0%
9	564	1	Surface	PCB, Total	1.93E+00	6.04E-06	2.28E-05	1.43E-06		3.02E-05	11%
9	564	1	Surface	Thallium	2.36E+00					0.00E+00	0%
9	564	1	Surface	Thorium-230	5.01E+00	1.28E-06		3.22E-08	9.44E-08	1.40E-06	0%
9	564	1	Surface	Uranium	5.83E+01					0.00E+00	0%
9	564	1	Surface	Uranium-234	6.93E+00	1.38E-06		1.78E-08	4.02E-08	1.44E-06	1%
9	564	1	Surface	Uranium-235	3.87E-01	7.95E-08		8.82E-10	4.84E-06	4.92E-06	2%
9	564	1	Surface	Uranium-238	8.33E+00	2.20E-06		1.76E-08	2.19E-05	2.41E-05	8%
9	564	1	Surface	Vanadium	8.06E+01					0.00E+00	0%
9	**564**	**1**	**Surface**	**Totals**		**1.12E-04**	**1.04E-04**	**6.47E-06**	**6.31E-05**	**2.86E-04**	
9	**564**	**1**	**Surface**	**Percent**		**39%**	**36%**	**2%**	**22%**		
9	567	3	Surface	Chromium	3.79E+01			2.44E-06		2.44E-06	100%
9	**567**	**3**	**Surface**	**Totals**				**2.44E-06**		**2.44E-06**	
9	**567**	**3**	**Surface**	**Percent**				**100%**			
9	567	4	Surface	Aluminum	1.25E+04					0.00E+00	0%
9	567	4	Surface	Chromium	1.63E+01			1.05E-06		1.05E-06	26%
9	567	4	Surface	Uranium-238	1.05E+00	2.78E-07		2.21E-09	2.75E-06	3.03E-06	74%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**567**	**4**	**Surface**	**Totals**		**2.78E-07**		**1.05E-06**	**2.75E-06**	**4.08E-06**	
9	**567**	**4**	**Surface**	**Percent**		**7%**		**26%**	**67%**		
10	14	1	Surface	Americium-241	1.27E+00	3.46E-07		8.04E-09	8.05E-07	1.16E-06	2%
10	14	1	Surface	Arsenic	1.10E+01	2.58E-05	2.08E-05	3.63E-08		4.66E-05	64%
10	14	1	Surface	Chromium	6.36E+01			4.09E-06		4.09E-06	6%
10	14	1	Surface	Iron	1.89E+04					0.00E+00	0%
10	14	1	Surface	Neptunium-237	2.14E-01	4.37E-08		8.55E-10	3.92E-06	3.96E-06	5%
10	14	1	Surface	Nickel	1.40E+02			2.78E-08		2.78E-08	0%
10	14	1	Surface	PCB, Total	5.00E-01	1.57E-06	5.90E-06	3.71E-07		7.83E-06	11%
10	14	1	Surface	Silver	1.67E+01					0.00E+00	0%
10	14	1	Surface	Technetium-99	4.06E+02	3.92E-06		1.29E-09	7.61E-07	4.68E-06	6%
10	14	1	Surface	Uranium	7.21E+01					0.00E+00	0%
10	14	1	Surface	Uranium-238	1.69E+00	4.47E-07		3.57E-09	4.43E-06	4.88E-06	7%
10	**14**	**1**	**Surface**	**Totals**		**3.21E-05**	**2.67E-05**	**4.54E-06**	**9.92E-06**	**7.33E-05**	
10	**14**	**1**	**Surface**	**Percent**		**44%**	**36%**	**6%**	**14%**		
10	14	2	Surface	Antimony	3.70E+00					0.00E+00	0%
10	14	2	Surface	Arsenic	1.45E+01	3.41E-05	2.75E-05	4.80E-08		6.17E-05	21%
10	14	2	Surface	Beryllium	7.10E-01			1.30E-09		1.30E-09	0%
10	14	2	Surface	Chromium	6.65E+01			4.28E-06		4.28E-06	1%
10	14	2	Surface	Copper	1.76E+02					0.00E+00	0%
10	14	2	Surface	Iron	3.72E+04					0.00E+00	0%
10	14	2	Surface	Manganese	1.44E+03					0.00E+00	0%
10	14	2	Surface	Mercury	2.67E-01					0.00E+00	0%
10	14	2	Surface	Neptunium-237	7.70E-01	1.57E-07		3.08E-09	1.41E-05	1.43E-05	5%
10	14	2	Surface	Nickel	6.78E+02			1.35E-07		1.35E-07	0%
10	14	2	Surface	PCB, Total	3.90E-01	1.22E-06	4.60E-06	2.90E-07		6.11E-06	2%
10	14	2	Surface	Thorium-230	5.98E+00	1.52E-06		3.85E-08	1.13E-07	1.67E-06	1%
10	14	2	Surface	Total PAH	3.38E-01	3.86E-06	1.35E-05	1.70E-08		1.74E-05	6%
10	14	2	Surface	Uranium	2.93E+02					0.00E+00	0%
10	14	2	Surface	Uranium-234	3.24E+01	6.45E-06		8.34E-08	1.88E-07	6.72E-06	2%
10	14	2	Surface	Uranium-235	2.00E+00	4.11E-07		4.56E-09	2.50E-05	2.54E-05	8%
10	14	2	Surface	Uranium-238	5.61E+01	1.48E-05		1.18E-07	1.47E-04	1.62E-04	54%
10	**14**	**2**	**Surface**	**Totals**		**6.26E-05**	**4.56E-05**	**5.02E-06**	**1.87E-04**	**3.00E-04**	
10	**14**	**2**	**Surface**	**Percent**		**21%**	**15%**	**2%**	**62%**		
10	14	3	Surface	Arsenic	1.30E+01	3.05E-05	2.46E-05	4.28E-08		5.51E-05	28%
10	14	3	Surface	Chromium	7.01E+01			4.51E-06		4.51E-06	2%
10	14	3	Surface	Copper	1.29E+02					0.00E+00	0%
10	14	3	Surface	Iron	3.48E+04					0.00E+00	0%
10	14	3	Surface	Manganese	1.06E+03					0.00E+00	0%
10	14	3	Surface	Mercury	7.48E+00					0.00E+00	0%
10	14	3	Surface	Molybdenum	2.21E+01					0.00E+00	0%
10	14	3	Surface	Nickel	5.76E+02			1.15E-07		1.15E-07	0%
10	14	3	Surface	PCB, Total	8.65E+00	2.71E-05	1.02E-04	6.42E-06		1.35E-04	68%
10	14	3	Surface	Uranium	2.18E+02					0.00E+00	0%
10	14	3	Surface	Uranium-238	1.50E+00	3.97E-07		3.17E-09	3.94E-06	4.34E-06	2%
10	**14**	**3**	**Surface**	**Totals**		**5.79E-05**	**1.27E-04**	**1.11E-05**	**3.94E-06**	**1.99E-04**	
10	**14**	**3**	**Surface**	**Percent**		**29%**	**63%**	**6%**	**2%**		
10	14	4	Surface	Antimony	4.30E+00					0.00E+00	0%
10	14	4	Surface	Arsenic	1.33E+01	3.12E-05	2.52E-05	4.39E-08		5.64E-05	7%
10	14	4	Surface	Chromium	7.20E+01			4.63E-06		4.63E-06	1%
10	14	4	Surface	Copper	3.54E+02					0.00E+00	0%
10	14	4	Surface	Iron	3.88E+04					0.00E+00	0%
10	14	4	Surface	Mercury	4.87E-01					0.00E+00	0%
10	14	4	Surface	Neptunium-237	2.68E+00	5.47E-07		1.07E-08	4.91E-05	4.97E-05	6%
10	14	4	Surface	Nickel	7.31E+02			1.45E-07		1.45E-07	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	4	Surface	PCB, Total	6.61E+00	2.07E-05	7.79E-05	4.91E-06		1.04E-04	12%
10	14	4	Surface	Silver	1.17E+01					0.00E+00	0%
10	14	4	Surface	Thorium-230	8.33E+00	2.12E-06		5.36E-08	1.57E-07	2.33E-06	0%
10	14	4	Surface	Total PAH	2.51E-01	2.87E-06	1.00E-05	1.26E-08		1.29E-05	2%
10	14	4	Surface	Uranium	3.72E+02					0.00E+00	0%
10	14	4	Surface	Uranium-234	1.13E+02	2.25E-05		2.91E-07	6.55E-07	2.34E-05	3%
10	14	4	Surface	Uranium-235	8.00E+00	1.64E-06		1.82E-08	1.00E-04	1.02E-04	12%
10	14	4	Surface	Uranium-238	1.69E+02	4.47E-05		3.57E-07	4.43E-04	4.88E-04	58%
10	**14**	**4**	**Surface**	**Totals**		**1.26E-04**	**1.13E-04**	**1.05E-05**	**5.93E-04**	**8.43E-04**	
10	**14**	**4**	**Surface**	**Percent**		**15%**	**13%**	**1%**	**70%**		
10	14	5	Surface	Antimony	2.30E+00					0.00E+00	0%
10	14	5	Surface	Arsenic	1.31E+01	3.07E-05	2.48E-05	4.32E-08		5.55E-05	13%
10	14	5	Surface	Cadmium	3.90E+00			5.37E-09		5.37E-09	0%
10	14	5	Surface	Chromium	4.70E+01			3.02E-06		3.02E-06	1%
10	14	5	Surface	Cobalt	1.40E+01			9.65E-08		9.65E-08	0%
10	14	5	Surface	Copper	1.34E+02					0.00E+00	0%
10	14	5	Surface	Iron	3.92E+04					0.00E+00	0%
10	14	5	Surface	Manganese	8.28E+02					0.00E+00	0%
10	14	5	Surface	Mercury	1.09E+01					0.00E+00	0%
10	14	5	Surface	Neptunium-237	1.74E+00	3.55E-07		6.95E-09	3.19E-05	3.22E-05	7%
10	14	5	Surface	Nickel	4.61E+02			9.18E-08		9.18E-08	0%
10	14	5	Surface	PCB, Total	1.00E+00	3.13E-06	1.18E-05	7.43E-07		1.57E-05	4%
10	14	5	Surface	Silver	1.29E+01					0.00E+00	0%
10	14	5	Surface	Technetium-99	1.01E+02	9.75E-07		3.21E-10	1.89E-07	1.16E-06	0%
10	14	5	Surface	Thallium	4.10E-01					0.00E+00	0%
10	14	5	Surface	Thorium-230	1.39E+01	3.54E-06		8.94E-08	2.62E-07	3.89E-06	1%
10	14	5	Surface	Total PAH	1.21E-01	1.38E-06	4.83E-06	6.09E-09		6.22E-06	1%
10	14	5	Surface	Uranium	2.62E+02					0.00E+00	0%
10	14	5	Surface	Uranium-234	5.22E+01	1.04E-05		1.34E-07	3.03E-07	1.08E-05	2%
10	14	5	Surface	Uranium-235	3.33E+00	6.84E-07		7.59E-09	4.16E-05	4.23E-05	10%
10	14	5	Surface	Uranium-238	9.42E+01	2.49E-05		1.99E-07	2.47E-04	2.72E-04	61%
10	**14**	**5**	**Surface**	**Totals**		**7.61E-05**	**4.14E-05**	**4.44E-06**	**3.21E-04**	**4.43E-04**	
10	**14**	**5**	**Surface**	**Percent**		**17%**	**9%**	**1%**	**72%**		
10	14	6	Surface	Antimony	2.70E+00					0.00E+00	0%
10	14	6	Surface	Cadmium	8.40E-01			1.16E-09		1.16E-09	0%
10	14	6	Surface	Chromium	4.46E+02			2.87E-05		2.87E-05	8%
10	14	6	Surface	Copper	1.22E+02					0.00E+00	0%
10	14	6	Surface	Mercury	3.47E-01					0.00E+00	0%
10	14	6	Surface	Neptunium-237	2.65E+00	5.41E-07		1.06E-08	4.85E-05	4.91E-05	14%
10	14	6	Surface	Nickel	9.63E+02			1.92E-07		1.92E-07	0%
10	14	6	Surface	PCB, Total	5.00E+00	1.57E-05	5.90E-05	3.71E-06		7.83E-05	23%
10	14	6	Surface	Silver	1.19E+01					0.00E+00	0%
10	14	6	Surface	Uranium	5.79E+02					0.00E+00	0%
10	14	6	Surface	Uranium-234	3.41E+01	6.79E-06		8.77E-08	1.98E-07	7.07E-06	2%
10	14	6	Surface	Uranium-235	2.27E+00	4.66E-07		5.17E-09	2.84E-05	2.88E-05	9%
10	14	6	Surface	Uranium-238	5.08E+01	1.34E-05		1.07E-07	1.33E-04	1.47E-04	43%
10	**14**	**6**	**Surface**	**Totals**		**3.69E-05**	**5.90E-05**	**3.28E-05**	**2.10E-04**	**3.39E-04**	
10	**14**	**6**	**Surface**	**Percent**		**11%**	**17%**	**10%**	**62%**		
10	14	7	Surface	Antimony	7.50E-01					0.00E+00	0%
10	14	7	Surface	Arsenic	1.13E+01	2.65E-05	2.14E-05	3.73E-08		4.80E-05	17%
10	14	7	Surface	Cadmium	2.70E+00			3.72E-09		3.72E-09	0%
10	14	7	Surface	Chromium	6.46E+01			4.15E-06		4.15E-06	1%
10	14	7	Surface	Mercury	7.82E+00					0.00E+00	0%
10	14	7	Surface	Neptunium-237	1.49E+00	3.04E-07		5.95E-09	2.73E-05	2.76E-05	10%
10	14	7	Surface	Nickel	1.22E+03			2.43E-07		2.43E-07	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	7	Surface	PCB, Total	7.60E+00	2.38E-05	8.97E-05	5.65E-06		1.19E-04	43%
10	14	7	Surface	Total PAH	6.31E-02	7.22E-07	2.52E-06	3.18E-09		3.25E-06	1%
10	14	7	Surface	Uranium	3.33E+02					0.00E+00	0%
10	14	7	Surface	Uranium-234	1.28E+01	2.55E-06		3.29E-08	7.42E-08	2.66E-06	1%
10	14	7	Surface	Uranium-235	9.60E-01	1.97E-07		2.19E-09	1.20E-05	1.22E-05	4%
10	14	7	Surface	Uranium-238	2.13E+01	5.64E-06		4.50E-08	5.59E-05	6.16E-05	22%
10	**14**	**7**	**Surface**	**Totals**		**5.98E-05**	**1.14E-04**	**1.02E-05**	**9.52E-05**	**2.79E-04**	
10	**14**	**7**	**Surface**	**Percent**		**21%**	**41%**	**4%**	**34%**		
10	14	8	Surface	Antimony	6.10E-01					0.00E+00	0%
10	14	8	Surface	Arsenic	1.14E+01	2.67E-05	2.16E-05	3.76E-08		4.83E-05	29%
10	14	8	Surface	Chromium	4.60E+01			2.96E-06		2.96E-06	2%
10	14	8	Surface	Mercury	7.90E+00					0.00E+00	0%
10	14	8	Surface	Neptunium-237	8.80E-01	1.80E-07		3.52E-09	1.61E-05	1.63E-05	10%
10	14	8	Surface	Nickel	6.73E+02			1.34E-07		1.34E-07	0%
10	14	8	Surface	PCB, Total	5.00E+00	1.57E-05	5.90E-05	3.71E-06		7.83E-05	46%
10	14	8	Surface	Silver	9.63E+00					0.00E+00	0%
10	14	8	Surface	Total PAH	6.28E-02	7.17E-07	2.51E-06	3.16E-09		3.23E-06	2%
10	14	8	Surface	Uranium	3.35E+02					0.00E+00	0%
10	14	8	Surface	Uranium-235	2.38E-01	4.89E-08		5.43E-10	2.97E-06	3.02E-06	2%
10	14	8	Surface	Uranium-238	5.92E+00	1.57E-06		1.25E-08	1.55E-05	1.71E-05	10%
10	**14**	**8**	**Surface**	**Totals**		**4.49E-05**	**8.30E-05**	**6.87E-06**	**3.46E-05**	**1.69E-04**	
10	**14**	**8**	**Surface**	**Percent**		**26%**	**49%**	**4%**	**20%**		
10	14	9	Surface	Antimony	2.00E+00					0.00E+00	0%
10	14	9	Surface	Arsenic	1.40E+01	3.30E-05	2.66E-05	4.64E-08		5.96E-05	1%
10	14	9	Surface	Cadmium	9.40E-01			1.30E-09		1.30E-09	0%
10	14	9	Surface	Cesium-137	4.53E-01	2.47E-08		1.22E-12	2.65E-05	2.65E-05	1%
10	14	9	Surface	Chromium	4.64E+01			2.99E-06		2.99E-06	0%
10	14	9	Surface	Mercury	1.13E+00					0.00E+00	0%
10	14	9	Surface	Neptunium-237	1.09E+01	2.23E-06		4.37E-08	2.00E-04	2.03E-04	4%
10	14	9	Surface	Nickel	9.43E+02			1.88E-07		1.88E-07	0%
10	14	9	Surface	PCB, Total	6.84E+00	2.14E-05	8.07E-05	5.08E-06		1.07E-04	2%
10	14	9	Surface	Technetium-99	1.96E+02	1.89E-06		6.23E-10	3.67E-07	2.26E-06	0%
10	14	9	Surface	Total PAH	4.87E-01	5.57E-06	1.95E-05	2.45E-08		2.51E-05	1%
10	14	9	Surface	Uranium	1.46E+03					0.00E+00	0%
10	14	9	Surface	Uranium-234	8.32E+02	1.66E-04		2.14E-06	4.83E-06	1.73E-04	4%
10	14	9	Surface	Uranium-235	5.46E+01	1.12E-05		1.24E-07	6.82E-04	6.93E-04	15%
10	14	9	Surface	Uranium-238	1.20E+03	3.18E-04		2.53E-06	3.15E-03	3.47E-03	73%
10	**14**	**9**	**Surface**	**Totals**		**5.58E-04**	**1.27E-04**	**1.32E-05**	**4.06E-03**	**4.76E-03**	
10	**14**	**9**	**Surface**	**Percent**		**12%**	**3%**	**0%**	**85%**		
10	14	10	Surface	Antimony	9.40E-01					0.00E+00	0%
10	14	10	Surface	Arsenic	1.12E+01	2.64E-05	2.13E-05	3.71E-08		4.77E-05	12%
10	14	10	Surface	Chromium	4.19E+01			2.69E-06		2.69E-06	1%
10	14	10	Surface	Copper	1.41E+02					0.00E+00	0%
10	14	10	Surface	Iron	2.75E+04					0.00E+00	0%
10	14	10	Surface	Mercury	2.51E+01					0.00E+00	0%
10	14	10	Surface	Neptunium-237	2.64E+00	5.39E-07		1.05E-08	4.84E-05	4.89E-05	12%
10	14	10	Surface	Nickel	6.00E+02			1.20E-07		1.20E-07	0%
10	14	10	Surface	PCB, Total	9.38E+00	2.94E-05	1.11E-04	6.97E-06		1.47E-04	36%
10	14	10	Surface	Total PAH	2.72E-01	3.10E-06	1.09E-05	1.37E-08		1.40E-05	3%
10	14	10	Surface	Uranium	2.88E+02					0.00E+00	0%
10	14	10	Surface	Uranium-234	2.42E+01	4.82E-06		6.23E-08	1.40E-07	5.02E-06	1%
10	14	10	Surface	Uranium-235	1.76E+00	3.61E-07		4.01E-09	2.20E-05	2.24E-05	6%
10	14	10	Surface	Uranium-238	4.09E+01	1.08E-05		8.63E-08	1.07E-04	1.18E-04	29%
10	**14**	**10**	**Surface**	**Totals**		**7.54E-05**	**1.43E-04**	**9.99E-06**	**1.78E-04**	**4.06E-04**	
10	**14**	**10**	**Surface**	**Percent**		**19%**	**35%**	**2%**	**44%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	518	1	Surface	Carbazole	1.17E+01	3.67E-07	9.87E-07			1.35E-06	0%
10	518	1	Surface	Cobalt	6.80E+00			4.69E-08		4.69E-08	0%
10	518	1	Surface	Nickel	1.29E+01			2.56E-09		2.56E-09	0%
10	518	1	Surface	PCB, Total	6.30E-01	1.97E-06	7.43E-06	4.68E-07		9.87E-06	0%
10	518	1	Surface	Pyrene	3.94E+01					0.00E+00	0%
10	518	1	Surface	Total PAH	3.90E+01	4.45E-04	1.56E-03	1.96E-06		2.00E-03	99%
10	518	1	Surface	Uranium	2.17E+02					0.00E+00	0%
10	518	1	Surface	Uranium-235	6.74E-02	1.38E-08		1.54E-10	8.42E-07	8.56E-07	0%
10	518	1	Surface	Uranium-238	1.51E+00	4.01E-07		3.20E-09	3.97E-06	4.38E-06	0%
10	**518**	**1**	**Surface**	**Totals**		**4.48E-04**	**1.57E-03**	**2.48E-06**	**4.81E-06**	**2.02E-03**	
10	**518**	**1**	**Surface**	**Percent**		**22%**	**77%**	**0%**	**0%**		
10	520	1	Surface	Cesium-137	9.62E-01	5.25E-08		2.58E-12	5.62E-05	5.63E-05	64%
10	520	1	Surface	Chromium	3.17E+01			2.04E-06		2.04E-06	2%
10	520	1	Surface	Iron	1.56E+04					0.00E+00	0%
10	520	1	Surface	Mercury	1.07E+01					0.00E+00	0%
10	520	1	Surface	Neptunium-237	6.56E-01	1.34E-07		2.62E-09	1.20E-05	1.22E-05	14%
10	520	1	Surface	Nickel	2.60E+02			5.18E-08		5.18E-08	0%
10	520	1	Surface	Silver	1.30E+01					0.00E+00	0%
10	520	1	Surface	Thorium-230	1.13E+01	2.89E-06		7.29E-08	2.14E-07	3.17E-06	4%
10	520	1	Surface	Total PAH	3.18E-02	3.64E-07	1.27E-06	1.60E-09		1.64E-06	2%
10	520	1	Surface	Uranium	2.29E+01					0.00E+00	0%
10	520	1	Surface	Uranium-235	1.26E-01	2.59E-08		2.87E-10	1.57E-06	1.60E-06	2%
10	520	1	Surface	Uranium-238	3.93E+00	1.04E-06		8.29E-09	1.03E-05	1.14E-05	13%
10	**520**	**1**	**Surface**	**Totals**		**4.50E-06**	**1.27E-06**	**2.18E-06**	**8.03E-05**	**8.83E-05**	
10	**520**	**1**	**Surface**	**Percent**		**5%**	**1%**	**2%**	**91%**		
10	520	2	Surface	Beryllium	5.79E-01			1.06E-09		1.06E-09	0%
10	520	2	Surface	Chromium	6.67E+01			4.29E-06		4.29E-06	16%
10	520	2	Surface	Manganese	5.89E+02					0.00E+00	0%
10	520	2	Surface	Mercury	1.19E+01					0.00E+00	0%
10	520	2	Surface	Neptunium-237	7.48E-02	1.53E-08		2.99E-10	1.37E-06	1.39E-06	5%
10	520	2	Surface	Nickel	3.11E+02			6.18E-08		6.18E-08	0%
10	520	2	Surface	Total PAH	3.17E-01	3.62E-06	1.27E-05	1.60E-08		1.63E-05	60%
10	520	2	Surface	Uranium	3.96E+01					0.00E+00	0%
10	520	2	Surface	Uranium-238	1.78E+00	4.70E-07		3.75E-09	4.66E-06	5.14E-06	19%
10	**520**	**2**	**Surface**	**Totals**		**4.11E-06**	**1.27E-05**	**4.37E-06**	**6.03E-06**	**2.72E-05**	
10	**520**	**2**	**Surface**	**Percent**		**15%**	**47%**	**16%**	**22%**		
10	520	3	Surface	Chromium	3.97E+01			2.55E-06		2.55E-06	19%
10	520	3	Surface	Copper	1.19E+02					0.00E+00	0%
10	520	3	Surface	Nickel	2.65E+02			5.27E-08		5.27E-08	0%
10	520	3	Surface	Silver	1.27E+01					0.00E+00	0%
10	520	3	Surface	Total PAH	1.18E-01	1.35E-06	4.72E-06	5.94E-09		6.08E-06	46%
10	520	3	Surface	Uranium	1.92E+01					0.00E+00	0%
10	520	3	Surface	Uranium-238	1.57E+00	4.15E-07		3.31E-09	4.12E-06	4.54E-06	34%
10	**520**	**3**	**Surface**	**Totals**		**1.77E-06**	**4.72E-06**	**2.61E-06**	**4.12E-06**	**1.32E-05**	
10	**520**	**3**	**Surface**	**Percent**		**13%**	**36%**	**20%**	**31%**		
10	520	4	Surface	Chromium	3.82E+01			2.46E-06		2.46E-06	4%
10	520	4	Surface	Copper	1.11E+02					0.00E+00	0%
10	520	4	Surface	Mercury	9.69E+00					0.00E+00	0%
10	520	4	Surface	Neptunium-237	7.40E-01	1.51E-07		2.96E-09	1.36E-05	1.37E-05	21%
10	520	4	Surface	Nickel	2.82E+02			5.61E-08		5.61E-08	0%
10	520	4	Surface	Silver	1.04E+01					0.00E+00	0%
10	520	4	Surface	Total PAH	5.52E-01	6.31E-06	2.21E-05	2.78E-08		2.84E-05	43%
10	520	4	Surface	Uranium	2.40E+01					0.00E+00	0%
10	520	4	Surface	Uranium-235	2.42E-01	4.97E-08		5.52E-10	3.02E-06	3.07E-06	5%
10	520	4	Surface	Uranium-238	6.26E+00	1.66E-06		1.32E-08	1.64E-05	1.81E-05	27%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	**520**	**4**	**Surface**	**Totals**		**8.17E-06**	**2.21E-05**	**2.56E-06**	**3.30E-05**	**6.58E-05**	
10	**520**	**4**	**Surface**	**Percent**		**12%**	**34%**	**4%**	**50%**		
10	520	5	Surface	Antimony	9.60E-01					0.00E+00	0%
10	520	5	Surface	Chromium	3.68E+01			2.37E-06		2.37E-06	8%
10	520	5	Surface	Neptunium-237	1.55E-01	3.16E-08		6.19E-10	2.84E-06	2.87E-06	10%
10	520	5	Surface	Nickel	1.47E+02			2.92E-08		2.92E-08	0%
10	520	5	Surface	Total PAH	3.87E-01	4.43E-06	1.55E-05	1.95E-08		1.99E-05	68%
10	520	5	Surface	Uranium-238	1.45E+00	3.84E-07		3.06E-09	3.80E-06	4.19E-06	14%
10	**520**	**5**	**Surface**	**Totals**		**4.84E-06**	**1.55E-05**	**2.42E-06**	**6.64E-06**	**2.94E-05**	
10	**520**	**5**	**Surface**	**Percent**		**16%**	**53%**	**8%**	**23%**		
11	81	1	Surface	Aluminum	9.57E+03					0.00E+00	0%
11	81	1	Surface	Arsenic	1.03E+01	2.41E-05	1.94E-05	3.39E-08		4.35E-05	2%
11	81	1	Surface	Beryllium	7.57E-01			1.39E-09		1.39E-09	0%
11	81	1	Surface	Chromium	8.62E+01			5.54E-06		5.54E-06	0%
11	81	1	Surface	Mercury	8.33E+00					0.00E+00	0%
11	81	1	Surface	Nickel	7.29E+01			1.45E-08		1.45E-08	0%
11	81	1	Surface	PCB, Total	1.60E+02	5.00E-04	1.88E-03	1.19E-04		2.50E-03	97%
11	81	1	Surface	Silver	2.70E+00					0.00E+00	0%
11	81	1	Surface	Total PAH	5.53E-01	6.32E-06	2.21E-05	2.78E-08		2.84E-05	1%
11	81	1	Surface	Uranium	6.50E+03					0.00E+00	0%
11	81	1	Surface	Uranium-238	2.29E+00	6.05E-07		4.82E-09	5.99E-06	6.60E-06	0%
11	**81**	**1**	**Surface**	**Totals**		**5.31E-04**	**1.93E-03**	**1.24E-04**	**5.99E-06**	**2.59E-03**	
11	**81**	**1**	**Surface**	**Percent**		**21%**	**74%**	**5%**	**0%**		
11	153	1	Surface	PCB, Total	5.09E-01	1.59E-06	6.00E-06	3.78E-07		7.97E-06	64%
11	153	1	Surface	Total PAH	8.69E-02	9.93E-07	3.47E-06	4.37E-09		4.47E-06	36%
11	**153**	**1**	**Surface**	**Totals**		**2.59E-06**	**9.48E-06**	**3.83E-07**		**1.24E-05**	
11	**153**	**1**	**Surface**	**Percent**		**21%**	**76%**	**3%**			
11	156	1	Surface	Chromium	4.90E+01			3.15E-06		3.15E-06	17%
11	156	1	Surface	Manganese	2.83E+03					0.00E+00	0%
11	156	1	Surface	Mercury	9.87E+00					0.00E+00	0%
11	156	1	Surface	Nickel	6.16E+01			1.23E-08		1.23E-08	0%
11	156	1	Surface	PCB, Total	3.00E-01	9.39E-07	3.54E-06	2.23E-07		4.70E-06	25%
11	156	1	Surface	Total PAH	8.26E-02	9.44E-07	3.30E-06	4.16E-09		4.25E-06	23%
11	156	1	Surface	Uranium	2.32E+01					0.00E+00	0%
11	156	1	Surface	Uranium-238	2.19E+00	5.79E-07		4.62E-09	5.75E-06	6.33E-06	34%
11	**156**	**1**	**Surface**	**Totals**		**2.46E-06**	**6.84E-06**	**3.40E-06**	**5.75E-06**	**1.84E-05**	
11	**156**	**1**	**Surface**	**Percent**		**13%**	**37%**	**18%**	**31%**		
11	160	1	Surface	Antimony	6.80E-01					0.00E+00	0%
11	160	1	Surface	Total PAH	5.29E-02	6.05E-07	2.11E-06	2.66E-09		2.72E-06	100%
11	**160**	**1**	**Surface**	**Totals**		**6.05E-07**	**2.11E-06**	**2.66E-09**		**2.72E-06**	
11	**160**	**1**	**Surface**	**Percent**		**22%**	**78%**	**0%**			
11	163	1	Surface	Chromium	4.94E+01			3.18E-06		3.18E-06	27%
11	163	1	Surface	Total PAH	1.63E-01	1.86E-06	6.51E-06	8.20E-09		8.39E-06	73%
11	**163**	**1**	**Surface**	**Totals**		**1.86E-06**	**6.51E-06**	**3.19E-06**		**1.16E-05**	
11	**163**	**1**	**Surface**	**Percent**		**16%**	**56%**	**28%**			
11	219	1	Surface	Neptunium-237	3.31E-01	6.76E-08		1.32E-09	6.06E-06	6.13E-06	24%
11	219	1	Surface	Nickel	6.71E+01			1.34E-08		1.34E-08	0%
11	219	1	Surface	Total PAH	7.50E-02	8.58E-07	3.00E-06	3.78E-09		3.86E-06	15%
11	219	1	Surface	Uranium-235	1.92E-01	3.94E-08		4.38E-10	2.40E-06	2.44E-06	10%
11	219	1	Surface	Uranium-238	4.40E+00	1.16E-06		9.29E-09	1.15E-05	1.27E-05	51%
11	**219**	**1**	**Surface**	**Totals**		**2.13E-06**	**3.00E-06**	**2.82E-08**	**2.00E-05**	**2.52E-05**	
11	**219**	**1**	**Surface**	**Percent**		**8%**	**12%**	**0%**	**80%**		
11	488	1	Surface	Cesium-137	5.20E-01	2.84E-08		1.40E-12	3.04E-05	3.04E-05	14%
11	488	1	Surface	PCB, Total	1.03E+01	3.23E-05	1.21E-04	7.65E-06		1.61E-04	73%
11	488	1	Surface	Total PAH	2.50E-01	2.85E-06	9.98E-06	1.26E-08		1.28E-05	6%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.34. ELCR for the Future Hypothetical Residential Receptor (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
11	488	1	Surface	Uranium	1.48E+01					0.00E+00	0%
11	488	1	Surface	Uranium-235	1.49E-01	3.06E-08		3.40E-10	1.86E-06	1.89E-06	1%
11	488	1	Surface	Uranium-238	4.54E+00	1.20E-06		9.58E-09	1.19E-05	1.31E-05	6%
11	**488**	**1**	**Surface**	**Totals**		**3.64E-05**	**1.31E-04**	**7.67E-06**	**4.42E-05**	**2.20E-04**	
11	**488**	**1**	**Surface**	**Percent**		**17%**	**60%**	**3%**	**20%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	1	1	Surface	Beryllium	3.89E+00			6.72E-10		6.72E-10	0%
5	1	1	Surface	Cadmium	1.10E+00			1.42E-10		1.42E-10	0%
5	1	1	Surface	Cesium-137	5.91E-01	8.96E-10		1.59E-13	1.44E-06	1.44E-06	46%
5	1	1	Surface	Chromium	1.28E+01			7.75E-08		7.75E-08	2%
5	1	1	Surface	Neptunium-237	4.02E-01	2.28E-09		1.61E-10	3.07E-07	3.09E-07	10%
5	1	1	Surface	PCB, Total	1.76E-01	1.12E-08	5.65E-07	1.23E-08		5.89E-07	19%
5	1	1	Surface	Plutonium-239/240	6.14E+00	5.93E-08		4.62E-09	1.18E-09	6.51E-08	2%
5	1	1	Surface	Thorium-230	4.40E+01	3.11E-07		2.83E-08	3.46E-08	3.74E-07	12%
5	1	1	Surface	Uranium-235	1.06E-01	6.05E-10		2.42E-11	5.52E-08	5.58E-08	2%
5	1	1	Surface	Uranium-238	1.97E+00	1.45E-08		4.17E-10	2.16E-07	2.31E-07	7%
5	**1**	**1**	**Surface**	**Totals**		**4.00E-07**	**5.65E-07**	**1.24E-07**	**2.05E-06**	**3.14E-06**	
5	**1**	**1**	**Surface**	**Percent**		**13%**	**18%**	**4%**	**65%**		
5	1	2	Surface	Beryllium	8.23E+00			1.42E-09		1.42E-09	0%
5	1	2	Surface	Cadmium	6.46E+00			8.37E-10		8.37E-10	0%
5	1	2	Surface	Chromium	2.01E+02			1.22E-06		1.22E-06	1%
5	1	2	Surface	Copper	1.81E+02					0.00E+00	0%
5	1	2	Surface	Mercury	5.94E+00					0.00E+00	0%
5	1	2	Surface	Nickel	5.75E+01			1.07E-09		1.07E-09	0%
5	1	2	Surface	PCB, Total	3.21E+01	2.05E-06	1.03E-04	2.24E-06		1.07E-04	99%
5	1	2	Surface	Silver	3.31E+01					0.00E+00	0%
5	1	2	Surface	Thallium	3.70E-01					0.00E+00	0%
5	1	2	Surface	Vanadium	3.49E+01					0.00E+00	0%
5	**1**	**2**	**Surface**	**Totals**		**2.05E-06**	**1.03E-04**	**3.46E-06**		**1.09E-04**	
5	**1**	**2**	**Surface**	**Percent**		**2%**	**95%**	**3%**			
5	1	3	Surface	Chromium	1.45E+01			8.74E-08		8.74E-08	9%
5	1	3	Surface	PCB, Total	2.17E-01	1.38E-08	6.97E-07	1.51E-08		7.26E-07	71%
5	1	3	Surface	Uranium-238	1.73E+00	1.27E-08		3.65E-10	1.89E-07	2.02E-07	20%
5	**1**	**3**	**Surface**	**Totals**		**2.65E-08**	**6.97E-07**	**1.03E-07**	**1.89E-07**	**1.02E-06**	
5	**1**	**3**	**Surface**	**Percent**		**3%**	**69%**	**10%**	**19%**		
5	1	4	Surface	Beryllium	7.25E-01			1.25E-10		1.25E-10	0%
5	1	4	Surface	Chromium	9.30E+01			5.62E-07		5.62E-07	43%
5	1	4	Surface	Cobalt-60	2.20E-02	3.10E-11		1.78E-14	2.62E-07	2.62E-07	20%
5	1	4	Surface	Nickel	4.69E+01			8.77E-10		8.77E-10	0%
5	1	4	Surface	PCB, Total	1.30E-01	8.28E-09	4.17E-07	9.07E-09		4.35E-07	33%
5	1	4	Surface	Thorium-230	5.03E+00	3.56E-08		3.24E-09	3.95E-09	4.27E-08	3%
5	**1**	**4**	**Surface**	**Totals**		**4.39E-08**	**4.17E-07**	**5.75E-07**	**2.66E-07**	**1.30E-06**	
5	**1**	**4**	**Surface**	**Percent**		**3%**	**32%**	**44%**	**20%**		
5	1	5	Surface	Beryllium	8.30E+00			1.43E-09		1.43E-09	0%
5	1	5	Surface	Cadmium	1.20E+00			1.55E-10		1.55E-10	0%
5	1	5	Surface	Nickel	4.07E+01			7.61E-10		7.61E-10	0%
5	1	5	Surface	PCB, Total	2.70E-01	1.72E-08	8.67E-07	1.88E-08		9.03E-07	45%
5	1	5	Surface	Total PAH	9.83E-02	2.29E-08	1.07E-06	4.65E-10		1.09E-06	55%
5	**1**	**5**	**Surface**	**Totals**		**4.01E-08**	**1.94E-06**	**2.17E-08**		**2.00E-06**	
5	**1**	**5**	**Surface**	**Percent**		**2%**	**97%**	**1%**			
5	99	1	Surface	Chromium	5.51E+01			3.33E-07		3.33E-07	57%
5	99	1	Surface	Cobalt-60	1.19E-02	1.68E-11		9.62E-15	1.41E-07	1.42E-07	24%
5	99	1	Surface	Mercury	9.53E+00					0.00E+00	0%
5	99	1	Surface	Nickel	7.02E+01			1.31E-09		1.31E-09	0%
5	99	1	Surface	Silver	1.03E+01					0.00E+00	0%
5	99	1	Surface	Uranium-238	9.45E-01	6.95E-09		2.00E-10	1.03E-07	1.10E-07	19%
5	**99**	**1**	**Surface**	**Totals**		**6.96E-09**		**3.34E-07**	**2.45E-07**	**5.86E-07**	
5	**99**	**1**	**Surface**	**Percent**		**1%**		**57%**	**42%**		
5	194	1	Surface	Antimony	1.50E+00					0.00E+00	0%
5	194	1	Surface	Chromium	3.87E+01			2.34E-07		2.34E-07	100%
5	194	1	Surface	Mercury	6.71E+00					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	1	Surface	Nickel	5.84E+01			1.09E-09		1.09E-09	0%
5	194	1	Surface	Silver	1.09E+01					0.00E+00	0%
5	**194**	**1**	**Surface**	**Totals**				**2.35E-07**		**2.35E-07**	
5	**194**	**1**	**Surface**	**Percent**				**100%**			
5	194	2	Surface	Chromium	5.96E+01			3.60E-07		3.60E-07	68%
5	194	2	Surface	Silver	1.31E+01					0.00E+00	0%
5	194	2	Surface	Uranium	2.28E+01					0.00E+00	0%
5	194	2	Surface	Uranium-238	1.42E+00	1.04E-08		3.00E-10	1.55E-07	1.66E-07	32%
5	**194**	**2**	**Surface**	**Totals**		**1.04E-08**		**3.60E-07**	**1.55E-07**	**5.26E-07**	
5	**194**	**2**	**Surface**	**Percent**		**2%**		**69%**	**30%**		
5	194	3	Surface	Antimony	6.90E-01					0.00E+00	0%
5	194	3	Surface	Arsenic	1.46E+01	7.00E-07	7.56E-06	4.54E-09		8.26E-06	91%
5	194	3	Surface	Chromium	3.90E+01			2.36E-07		2.36E-07	3%
5	194	3	Surface	Nickel	6.40E+01			1.20E-09		1.20E-09	0%
5	194	3	Surface	Total PAH	3.93E-02	9.14E-09	4.28E-07	1.86E-10		4.37E-07	5%
5	194	3	Surface	Uranium-238	1.28E+00	9.44E-09		2.71E-10	1.40E-07	1.50E-07	2%
5	**194**	**3**	**Surface**	**Totals**		**7.18E-07**	**7.98E-06**	**2.42E-07**	**1.40E-07**	**9.08E-06**	
5	**194**	**3**	**Surface**	**Percent**		**8%**	**88%**	**3%**	**2%**		
5	194	4	Surface	Chromium	4.84E+01			2.93E-07		2.93E-07	22%
5	194	4	Surface	Mercury	8.92E+00					0.00E+00	0%
5	194	4	Surface	Nickel	6.91E+01			1.29E-09		1.29E-09	0%
5	194	4	Surface	Silver	1.18E+01					0.00E+00	0%
5	194	4	Surface	Total PAH	7.30E-02	1.70E-08	7.94E-07	3.45E-10		8.11E-07	62%
5	194	4	Surface	Uranium-238	1.73E+00	1.27E-08		3.65E-10	1.89E-07	2.02E-07	15%
5	**194**	**4**	**Surface**	**Totals**		**2.97E-08**	**7.94E-07**	**2.95E-07**	**1.89E-07**	**1.31E-06**	
5	**194**	**4**	**Surface**	**Percent**		**2%**	**61%**	**23%**	**14%**		
5	194	5	Surface	Chromium	4.58E+01			2.77E-07		2.77E-07	39%
5	194	5	Surface	Mercury	8.69E+00					0.00E+00	0%
5	194	5	Surface	Nickel	7.54E+01			1.41E-09		1.41E-09	0%
5	194	5	Surface	Silver	1.25E+01					0.00E+00	0%
5	194	5	Surface	Total PAH	2.37E-02	5.51E-09	2.58E-07	1.12E-10		2.64E-07	37%
5	194	5	Surface	Uranium-238	1.38E+00	1.01E-08		2.91E-10	1.51E-07	1.61E-07	23%
5	**194**	**5**	**Surface**	**Totals**		**1.57E-08**	**2.58E-07**	**2.79E-07**	**1.51E-07**	**7.03E-07**	
5	**194**	**5**	**Surface**	**Percent**		**2%**	**37%**	**40%**	**21%**		
5	194	6	Surface	Chromium	3.70E+01			2.24E-07		2.24E-07	59%
5	194	6	Surface	Manganese	1.08E+03					0.00E+00	0%
5	194	6	Surface	Nickel	8.06E+01			1.51E-09		1.51E-09	0%
5	194	6	Surface	Silver	9.89E+00					0.00E+00	0%
5	194	6	Surface	Uranium-238	1.32E+00	9.70E-09		2.79E-10	1.44E-07	1.54E-07	41%
5	**194**	**6**	**Surface**	**Totals**		**9.70E-09**		**2.25E-07**	**1.44E-07**	**3.79E-07**	
5	**194**	**6**	**Surface**	**Percent**		**3%**		**59%**	**38%**		
5	194	7	Surface	Chromium	5.32E+01			3.21E-07		3.21E-07	100%
5	194	7	Surface	Nickel	7.71E+01			1.44E-09		1.44E-09	0%
5	194	7	Surface	Silver	1.25E+01					0.00E+00	0%
5	**194**	**7**	**Surface**	**Totals**				**3.23E-07**		**3.23E-07**	
5	**194**	**7**	**Surface**	**Percent**				**100%**			
5	194	8	Surface	Bis(2-ethylhexyl)phthalate	1.50E+01	6.69E-09	2.41E-07	2.59E-12		2.48E-07	4%
5	194	8	Surface	Chromium	5.36E+01			3.24E-07		3.24E-07	5%
5	194	8	Surface	Manganese	8.00E+02					0.00E+00	0%
5	194	8	Surface	Total PAH	4.85E-01	1.13E-07	5.28E-06	2.29E-09		5.39E-06	88%
5	194	8	Surface	Uranium-238	1.39E+00	1.02E-08		2.93E-10	1.52E-07	1.62E-07	3%
5	**194**	**8**	**Surface**	**Totals**		**1.30E-07**	**5.52E-06**	**3.26E-07**	**1.52E-07**	**6.13E-06**	
5	**194**	**8**	**Surface**	**Percent**		**2%**	**90%**	**5%**	**2%**		
5	194	9	Surface	Arsenic	1.14E+01	5.46E-07	5.89E-06	3.54E-09		6.44E-06	95%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	9	Surface	Chromium	5.17E+01			3.12E-07		3.12E-07	5%
5	**194**	**9**	**Surface**	**Totals**		**5.46E-07**	**5.89E-06**	**3.16E-07**		**6.76E-06**	
5	**194**	**9**	**Surface**	**Percent**		**8%**	**87%**	**5%**			
5	194	10	Surface	Arsenic	1.22E+01	5.81E-07	6.28E-06	3.77E-09		6.86E-06	59%
5	194	10	Surface	Cesium-137	5.81E-01	8.81E-10		1.56E-13	1.42E-06	1.42E-06	12%
5	194	10	Surface	Chromium	3.63E+01			2.19E-07		2.19E-07	2%
5	194	10	Surface	Nickel	7.60E+01			1.42E-09		1.42E-09	0%
5	194	10	Surface	Total PAH	2.57E-01	5.98E-08	2.80E-06	1.22E-09		2.86E-06	25%
5	194	10	Surface	Uranium-238	1.49E+00	1.10E-08		3.15E-10	1.63E-07	1.74E-07	2%
5	**194**	**10**	**Surface**	**Totals**		**6.53E-07**	**9.07E-06**	**2.26E-07**	**1.58E-06**	**1.15E-05**	
5	**194**	**10**	**Surface**	**Percent**		**6%**	**79%**	**2%**	**14%**		
5	194	11	Surface	Chromium	3.27E+01			1.97E-07		1.97E-07	14%
5	194	11	Surface	Mercury	8.09E+00					0.00E+00	0%
5	194	11	Surface	Nickel	1.01E+02			1.88E-09		1.88E-09	0%
5	194	11	Surface	PCB, Total	8.40E-02	5.35E-09	2.70E-07	5.86E-09		2.81E-07	21%
5	194	11	Surface	Silver	1.33E+01					0.00E+00	0%
5	194	11	Surface	Total PAH	7.95E-02	1.85E-08	8.66E-07	3.76E-10		8.84E-07	65%
5	**194**	**11**	**Surface**	**Totals**		**2.38E-08**	**1.14E-06**	**2.06E-07**		**1.36E-06**	
5	**194**	**11**	**Surface**	**Percent**		**2%**	**83%**	**15%**			
5	194	12	Surface	Chromium	6.34E+01			3.83E-07		3.83E-07	4%
5	194	12	Surface	Nickel	7.86E+01			1.47E-09		1.47E-09	0%
5	194	12	Surface	Silver	1.20E+01					0.00E+00	0%
5	194	12	Surface	Total PAH	8.91E-01	2.07E-07	9.70E-06	4.22E-09		9.91E-06	96%
5	**194**	**12**	**Surface**	**Totals**		**2.07E-07**	**9.70E-06**	**3.89E-07**		**1.03E-05**	
5	**194**	**12**	**Surface**	**Percent**		**2%**	**94%**	**4%**			
5	194	13	Surface	Chromium	4.77E+01			2.88E-07		2.88E-07	22%
5	194	13	Surface	Nickel	6.03E+01			1.13E-09		1.13E-09	0%
5	194	13	Surface	Total PAH	9.13E-02	2.12E-08	9.94E-07	4.32E-10		1.02E-06	78%
5	**194**	**13**	**Surface**	**Totals**		**2.12E-08**	**9.94E-07**	**2.89E-07**		**1.30E-06**	
5	**194**	**13**	**Surface**	**Percent**		**2%**	**76%**	**22%**			
5	194	14	Surface	Chromium	5.21E+01			3.15E-07		3.15E-07	100%
5	194	14	Surface	Mercury	8.14E+00					0.00E+00	0%
5	**194**	**14**	**Surface**	**Totals**				**3.15E-07**		**3.15E-07**	
5	**194**	**14**	**Surface**	**Percent**				**100%**			
5	194	15	Surface	Chromium	5.33E+01			3.22E-07		3.22E-07	100%
5	194	15	Surface	Silver	1.03E+01					0.00E+00	0%
5	**194**	**15**	**Surface**	**Totals**				**3.22E-07**		**3.22E-07**	
5	**194**	**15**	**Surface**	**Percent**				**100%**			
5	194	16	Surface	Antimony	7.40E-01					0.00E+00	0%
5	194	16	Surface	Arsenic	1.15E+01	5.50E-07	5.95E-06	3.58E-09		6.50E-06	95%
5	194	16	Surface	Beryllium	8.70E-01			1.50E-10		1.50E-10	0%
5	194	16	Surface	Chromium	5.32E+01			3.22E-07		3.22E-07	5%
5	194	16	Surface	Nickel	7.20E+01			1.35E-09		1.35E-09	0%
5	194	16	Surface	Thallium	6.30E-01					0.00E+00	0%
5	194	16	Surface	Vanadium	4.11E+01					0.00E+00	0%
5	**194**	**16**	**Surface**	**Totals**		**5.50E-07**	**5.95E-06**	**3.27E-07**		**6.82E-06**	
5	**194**	**16**	**Surface**	**Percent**		**8%**	**87%**	**5%**			
5	194	17	Surface	Arsenic	1.16E+01	5.52E-07	5.96E-06	3.58E-09		6.52E-06	76%
5	194	17	Surface	Cadmium	1.10E+00			1.42E-10		1.42E-10	0%
5	194	17	Surface	Chromium	4.65E+01			2.81E-07		2.81E-07	3%
5	194	17	Surface	Total PAH	1.59E-01	3.69E-08	1.73E-06	7.50E-10		1.76E-06	21%
5	**194**	**17**	**Surface**	**Totals**		**5.89E-07**	**7.69E-06**	**2.85E-07**		**8.56E-06**	
5	**194**	**17**	**Surface**	**Percent**		**7%**	**90%**	**3%**			
5	194	18	Surface	Arsenic	1.06E+01	5.05E-07	5.46E-06	3.28E-09		5.96E-06	93%
5	194	18	Surface	Beryllium	7.40E-01			1.28E-10		1.28E-10	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	18	Surface	Chromium	6.85E+01			4.14E-07		4.14E-07	6%
5	194	18	Surface	Nickel	5.78E+01			1.08E-09		1.08E-09	0%
5	**194**	**18**	**Surface**	**Totals**		**5.05E-07**	**5.46E-06**	**4.18E-07**		**6.38E-06**	
5	**194**	**18**	**Surface**	**Percent**		**8%**	**86%**	**7%**			
5	194	19	Surface	Arsenic	1.07E+01	5.11E-07	5.52E-06	3.32E-09		6.03E-06	95%
5	194	19	Surface	Chromium	4.84E+01			2.92E-07		2.92E-07	5%
5	194	19	Surface	Nickel	5.84E+01			1.09E-09		1.09E-09	0%
5	**194**	**19**	**Surface**	**Totals**		**5.11E-07**	**5.52E-06**	**2.97E-07**		**6.32E-06**	
5	**194**	**19**	**Surface**	**Percent**		**8%**	**87%**	**5%**			
5	194	20	Surface	Arsenic	1.18E+01	5.66E-07	6.11E-06	3.67E-09		6.68E-06	91%
5	194	20	Surface	Barium	3.26E+02					0.00E+00	0%
5	194	20	Surface	Beryllium	1.10E+00			1.90E-10		1.90E-10	0%
5	194	20	Surface	Chromium	5.24E+01			3.16E-07		3.16E-07	4%
5	194	20	Surface	Cobalt	2.11E+01			1.37E-08		1.37E-08	0%
5	194	20	Surface	Manganese	2.29E+03					0.00E+00	0%
5	194	20	Surface	Mercury	7.28E+00					0.00E+00	0%
5	194	20	Surface	Nickel	6.57E+01			1.23E-09		1.23E-09	0%
5	194	20	Surface	Silver	1.22E+01					0.00E+00	0%
5	194	20	Surface	Total PAH	3.10E-02	7.21E-09	3.37E-07	1.47E-10		3.45E-07	5%
5	194	20	Surface	Vanadium	3.81E+01					0.00E+00	0%
5	**194**	**20**	**Surface**	**Totals**		**5.73E-07**	**6.45E-06**	**3.35E-07**		**7.36E-06**	
5	**194**	**20**	**Surface**	**Percent**		**8%**	**88%**	**5%**			
5	194	21	Surface	Antimony	9.30E-01					0.00E+00	0%
5	194	21	Surface	Chromium	5.51E+01			3.33E-07		3.33E-07	100%
5	194	21	Surface	Mercury	6.62E+00					0.00E+00	0%
5	194	21	Surface	Nickel	7.01E+01			1.31E-09		1.31E-09	0%
5	194	21	Surface	Thallium	6.40E-01					0.00E+00	0%
5	**194**	**21**	**Surface**	**Totals**				**3.34E-07**		**3.34E-07**	
5	**194**	**21**	**Surface**	**Percent**				**100%**			
5	194	22	Surface	Chromium	4.90E+01			2.96E-07		2.96E-07	1%
5	194	22	Surface	Manganese	8.19E+02					0.00E+00	0%
5	194	22	Surface	PCB, Total	1.09E+01	6.96E-07	3.51E-05	7.62E-07		3.65E-05	99%
5	**194**	**22**	**Surface**	**Totals**		**6.96E-07**	**3.51E-05**	**1.06E-06**		**3.68E-05**	
5	**194**	**22**	**Surface**	**Percent**		**2%**	**95%**	**3%**			
5	194	23	Surface	Arsenic	1.16E+01	5.52E-07	5.96E-06	3.58E-09		6.52E-06	94%
5	194	23	Surface	Chromium	6.60E+01			3.99E-07		3.99E-07	6%
5	194	23	Surface	Iron	1.83E+04					0.00E+00	0%
5	194	23	Surface	Nickel	8.77E+01			1.64E-09		1.64E-09	0%
5	194	23	Surface	Silver	1.15E+01					0.00E+00	0%
5	**194**	**23**	**Surface**	**Totals**		**5.52E-07**	**5.96E-06**	**4.04E-07**		**6.92E-06**	
5	**194**	**23**	**Surface**	**Percent**		**8%**	**86%**	**6%**			
5	194	24	Surface	Chromium	5.02E+01			3.03E-07		3.03E-07	54%
5	194	24	Surface	Nickel	7.08E+01			1.32E-09		1.32E-09	0%
5	194	24	Surface	Total PAH	2.28E-02	5.30E-09	2.48E-07	1.08E-10		2.54E-07	45%
5	**194**	**24**	**Surface**	**Totals**		**5.30E-09**	**2.48E-07**	**3.05E-07**		**5.58E-07**	
5	**194**	**24**	**Surface**	**Percent**		**1%**	**44%**	**55%**			
5	194	25	Surface	Barium	3.00E+02					0.00E+00	0%
5	194	25	Surface	Chromium	6.13E+01			3.70E-07		3.70E-07	62%
5	194	25	Surface	Manganese	9.96E+02					0.00E+00	0%
5	194	25	Surface	Nickel	6.33E+01			1.18E-09		1.18E-09	0%
5	194	25	Surface	Total PAH	2.06E-02	4.79E-09	2.24E-07	9.74E-11		2.29E-07	38%
5	**194**	**25**	**Surface**	**Totals**		**4.79E-09**	**2.24E-07**	**3.71E-07**		**6.00E-07**	
5	**194**	**25**	**Surface**	**Percent**		**1%**	**37%**	**62%**			
5	194	26	Surface	Beryllium	7.00E-01			1.21E-10		1.21E-10	0%
5	194	26	Surface	Chromium	4.18E+01			2.53E-07		2.53E-07	100%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	194	26	Surface	Silver	1.03E+01					0.00E+00	0%
5	194	26	Surface	Thallium	3.90E-01					0.00E+00	0%
5	**194**	**26**	**Surface**	**Totals**				**2.53E-07**		**2.53E-07**	
5	**194**	**26**	**Surface**	**Percent**				**100%**			
5	194	27	Surface	Chromium	5.22E+01			3.15E-07		3.15E-07	100%
5	194	27	Surface	Nickel	6.55E+01			1.23E-09		1.23E-09	0%
5	194	27	Surface	Silver	1.01E+01					0.00E+00	0%
5	**194**	**27**	**Surface**	**Totals**				**3.16E-07**		**3.16E-07**	
5	**194**	**27**	**Surface**	**Percent**				**100%**			
5	194	28	Surface	Arsenic	1.20E+01	5.75E-07	6.21E-06	3.73E-09		6.79E-06	95%
5	194	28	Surface	Beryllium	7.10E-01			1.23E-10		1.23E-10	0%
5	194	28	Surface	Chromium	6.07E+01			3.67E-07		3.67E-07	5%
5	194	28	Surface	Manganese	1.14E+03					0.00E+00	0%
5	194	28	Surface	Nickel	6.95E+01			1.30E-09		1.30E-09	0%
5	194	28	Surface	Silver	1.08E+01					0.00E+00	0%
5	194	28	Surface	Vanadium	4.06E+01					0.00E+00	0%
5	**194**	**28**	**Surface**	**Totals**		**5.75E-07**	**6.21E-06**	**3.72E-07**		**7.16E-06**	
5	**194**	**28**	**Surface**	**Percent**		**8%**	**87%**	**5%**			
5	194	29	Surface	Antimony	7.10E-01					0.00E+00	0%
5	194	29	Surface	Chromium	5.06E+01			3.06E-07		3.06E-07	100%
5	194	29	Surface	Nickel	6.51E+01			1.22E-09		1.22E-09	0%
5	194	29	Surface	Silver	9.77E+00					0.00E+00	0%
5	**194**	**29**	**Surface**	**Totals**				**3.07E-07**		**3.07E-07**	
5	**194**	**29**	**Surface**	**Percent**				**100%**			
5	194	30	Surface	Chromium	5.66E+01			3.42E-07		3.42E-07	100%
5	194	30	Surface	Mercury	8.80E+00					0.00E+00	0%
5	194	30	Surface	Nickel	6.99E+01			1.31E-09		1.31E-09	0%
5	194	30	Surface	Silver	9.76E+00					0.00E+00	0%
5	**194**	**30**	**Surface**	**Totals**				**3.43E-07**		**3.43E-07**	
5	**194**	**30**	**Surface**	**Percent**				**100%**			
5	194	31	Surface	Cesium-137	5.70E-01	8.64E-10		1.53E-13	1.39E-06	1.39E-06	87%
5	194	31	Surface	Uranium-238	1.72E+00	1.26E-08		3.63E-10	1.88E-07	2.01E-07	13%
5	**194**	**31**	**Surface**	**Totals**		**1.35E-08**		**3.63E-10**	**1.58E-06**	**1.59E-06**	
5	**194**	**31**	**Surface**	**Percent**		**1%**		**0%**	**99%**		
5	196	1	Surface	Antimony	5.90E-01					0.00E+00	0%
5	196	1	Surface	Chromium	1.96E+01			1.18E-07		1.18E-07	22%
5	196	1	Surface	Neptunium-237	3.11E-01	1.76E-09		1.24E-10	2.37E-07	2.39E-07	44%
5	196	1	Surface	Nickel	5.56E+02			1.04E-08		1.04E-08	2%
5	196	1	Surface	Uranium	2.33E+01					0.00E+00	0%
5	196	1	Surface	Uranium-238	1.54E+00	1.13E-08		3.25E-10	1.68E-07	1.80E-07	33%
5	**196**	**1**	**Surface**	**Totals**		**1.31E-08**		**1.29E-07**	**4.06E-07**	**5.48E-07**	
5	**196**	**1**	**Surface**	**Percent**		**2%**		**24%**	**74%**		
5	196	2	Surface	Barium	2.02E+02					0.00E+00	0%
5	196	2	Surface	Cadmium	2.53E+00			3.28E-10		3.28E-10	0%
5	196	2	Surface	Chromium	2.07E+01			1.25E-07		1.25E-07	1%
5	196	2	Surface	Nickel	7.36E+01			1.38E-09		1.38E-09	0%
5	196	2	Surface	PCB, Total	1.51E+00	9.62E-08	4.85E-06	1.05E-07		5.05E-06	39%
5	196	2	Surface	Total PAH	6.80E-01	1.58E-07	7.40E-06	3.22E-09		7.56E-06	58%
5	196	2	Surface	Uranium-238	2.21E+00	1.62E-08		4.67E-10	2.42E-07	2.58E-07	2%
5	**196**	**2**	**Surface**	**Totals**		**2.71E-07**	**1.22E-05**	**2.36E-07**	**2.42E-07**	**1.30E-05**	
5	**196**	**2**	**Surface**	**Percent**		**2%**	**94%**	**2%**	**2%**		
5	489	1	Surface	Chromium	4.16E+01			2.52E-07		2.52E-07	19%
5	489	1	Surface	Nickel	7.88E+01			1.47E-09		1.47E-09	0%
5	489	1	Surface	Total PAH	8.22E-02	1.91E-08	8.94E-07	3.89E-10		9.14E-07	68%
5	489	1	Surface	Uranium-238	1.47E+00	1.08E-08		3.10E-10	1.61E-07	1.72E-07	13%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
5	**489**	**1**	**Surface**	**Totals**		**2.99E-08**	**8.94E-07**	**2.54E-07**	**1.61E-07**	**1.34E-06**	
5	**489**	**1**	**Surface**	**Percent**		**2%**	**67%**	**19%**	**12%**		
5	531	1	Surface	Antimony	1.00E+00					0.00E+00	0%
5	531	1	Surface	Arsenic	4.68E+01	2.24E-06	2.42E-05	1.45E-08		2.64E-05	95%
5	531	1	Surface	Cadmium	3.10E+00			4.01E-10		4.01E-10	0%
5	531	1	Surface	Chromium	5.05E+01			3.05E-07		3.05E-07	1%
5	531	1	Surface	Iron	5.68E+04					0.00E+00	0%
5	531	1	Surface	Nickel	1.62E+02			3.03E-09		3.03E-09	0%
5	531	1	Surface	Total PAH	5.34E-02	1.24E-08	5.81E-07	2.52E-10		5.94E-07	2%
5	531	1	Surface	Uranium	2.41E+01					0.00E+00	0%
5	531	1	Surface	Uranium-235	1.38E-01	7.87E-10		3.15E-11	7.19E-08	7.27E-08	0%
5	531	1	Surface	Uranium-238	3.48E+00	2.56E-08		7.35E-10	3.80E-07	4.07E-07	1%
5	531	1	Surface	Zinc	2.45E+03					0.00E+00	0%
5	**531**	**1**	**Surface**	**Totals**		**2.28E-06**	**2.47E-05**	**3.24E-07**	**4.52E-07**	**2.78E-05**	
5	**531**	**1**	**Surface**	**Percent**		**8%**	**89%**	**1%**	**2%**		
6	200	1	Surface	Antimony	5.60E-01					0.00E+00	0%
6	200	1	Surface	Cesium-137	5.74E-01	8.70E-10		1.54E-13	1.40E-06	1.40E-06	12%
6	200	1	Surface	Chromium	5.75E+01			3.48E-07		3.48E-07	3%
6	200	1	Surface	Mercury	6.71E+00					0.00E+00	0%
6	200	1	Surface	Nickel	1.28E+02			2.39E-09		2.39E-09	0%
6	200	1	Surface	PCB, Total	2.60E+00	1.66E-07	8.35E-06	1.81E-07		8.70E-06	77%
6	200	1	Surface	Total PAH	2.84E-02	6.60E-09	3.09E-07	1.34E-10		3.16E-07	3%
6	200	1	Surface	Uranium	2.73E+01					0.00E+00	0%
6	200	1	Surface	Uranium-235	1.43E-01	8.16E-10		3.26E-11	7.45E-08	7.53E-08	1%
6	200	1	Surface	Uranium-238	3.58E+00	2.63E-08		7.55E-10	3.91E-07	4.18E-07	4%
6	**200**	**1**	**Surface**	**Totals**		**2.00E-07**	**8.66E-06**	**5.32E-07**	**1.86E-06**	**1.13E-05**	
6	**200**	**1**	**Surface**	**Percent**		**2%**	**77%**	**5%**	**17%**		
6	212	1	Surface	Arsenic	1.44E+01	6.89E-07	7.44E-06	4.48E-09		8.14E-06	50%
6	212	1	Surface	Beryllium	8.10E-01			1.40E-10		1.40E-10	0%
6	212	1	Surface	Cesium-137	6.01E-01	9.11E-10		1.61E-13	1.46E-06	1.46E-06	9%
6	212	1	Surface	Chromium	3.58E+01			2.16E-07		2.16E-07	1%
6	212	1	Surface	Cobalt-60	8.76E-03	1.24E-11		7.08E-15	1.04E-07	1.04E-07	1%
6	212	1	Surface	Iron	4.14E+04					0.00E+00	0%
6	212	1	Surface	Neptunium-237	4.00E+00	2.27E-08		1.60E-09	3.05E-06	3.08E-06	19%
6	212	1	Surface	Nickel	8.69E+01			1.63E-09		1.63E-09	0%
6	212	1	Surface	PCB, Total	1.80E-01	1.15E-08	5.78E-07	1.26E-08		6.02E-07	4%
6	212	1	Surface	Plutonium-239/240	6.71E+00	6.48E-08		5.05E-09	1.29E-09	7.12E-08	0%
6	212	1	Surface	Thorium-230	2.60E+02	1.84E-06		1.67E-07	2.04E-07	2.21E-06	14%
6	212	1	Surface	Uranium	2.30E+01					0.00E+00	0%
6	212	1	Surface	Uranium-235	2.09E-01	1.19E-09		4.77E-11	1.09E-07	1.10E-07	1%
6	212	1	Surface	Uranium-238	3.17E+00	2.33E-08		6.69E-10	3.47E-07	3.70E-07	2%
6	**212**	**1**	**Surface**	**Totals**		**2.65E-06**	**8.02E-06**	**4.10E-07**	**5.28E-06**	**1.64E-05**	
6	**212**	**1**	**Surface**	**Percent**		**16%**	**49%**	**3%**	**32%**		
6	213	1	Surface	Antimony	8.50E-01					0.00E+00	0%
6	213	1	Surface	Chromium	4.78E+01			2.89E-07		2.89E-07	11%
6	213	1	Surface	Nickel	6.67E+01			1.25E-09		1.25E-09	0%
6	213	1	Surface	PCB, Total	7.30E-02	4.65E-09	2.34E-07	5.10E-09		2.44E-07	9%
6	213	1	Surface	Silver	1.32E+01					0.00E+00	0%
6	213	1	Surface	Total PAH	1.72E-01	4.00E-08	1.87E-06	8.13E-10		1.91E-06	70%
6	213	1	Surface	Uranium-238	2.33E+00	1.71E-08		4.92E-10	2.55E-07	2.72E-07	10%
6	**213**	**1**	**Surface**	**Totals**		**6.17E-08**	**2.10E-06**	**2.97E-07**	**2.55E-07**	**2.72E-06**	
6	**213**	**1**	**Surface**	**Percent**		**2%**	**77%**	**11%**	**9%**		
6	213	2	Surface	Chromium	4.48E+01			2.71E-07		2.71E-07	99%
6	213	2	Surface	Nickel	9.10E+01			1.70E-09		1.70E-09	1%
6	213	2	Surface	Silver	1.13E+01					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	**213**	**2**	**Surface**	**Totals**				**2.72E-07**		**2.72E-07**	
6	**213**	**2**	**Surface**	**Percent**				**100%**			
6	214	1	Surface	Antimony	5.70E-01					0.00E+00	
6	**214**	**1**	**Surface**	**Totals**						**0.00E+00**	
6	**214**	**1**	**Surface**	**Percent**							
6	215	1	Surface	Antimony	6.80E-01					0.00E+00	0%
6	215	1	Surface	Chromium	5.73E+01			3.46E-07		3.46E-07	28%
6	215	1	Surface	Iron	3.87E+04					0.00E+00	0%
6	215	1	Surface	Nickel	7.32E+01			1.37E-09		1.37E-09	0%
6	215	1	Surface	Total PAH	8.09E-02	1.88E-08	8.80E-07	3.83E-10		9.00E-07	72%
6	**215**	**1**	**Surface**	**Totals**		**1.88E-08**	**8.80E-07**	**3.48E-07**		**1.25E-06**	
6	**215**	**1**	**Surface**	**Percent**		**2%**	**71%**	**28%**			
6	216	1	Surface	Chromium	2.38E+01			1.44E-07		1.44E-07	7%
6	216	1	Surface	Total PAH	1.49E-01	3.47E-08	1.63E-06	7.06E-10		1.66E-06	85%
6	216	1	Surface	Uranium-238	1.33E+00	9.78E-09		2.81E-10	1.45E-07	1.55E-07	8%
6	**216**	**1**	**Surface**	**Totals**		**4.45E-08**	**1.63E-06**	**1.45E-07**	**1.45E-07**	**1.96E-06**	
6	**216**	**1**	**Surface**	**Percent**		**2%**	**83%**	**7%**	**7%**		
6	217	1	Surface	Chromium	8.58E+01			5.18E-07		5.18E-07	78%
6	217	1	Surface	Cobalt	1.96E+01			1.27E-08		1.27E-08	2%
6	217	1	Surface	Manganese	7.70E+02					0.00E+00	0%
6	217	1	Surface	Nickel	8.54E+01			1.60E-09		1.60E-09	0%
6	217	1	Surface	Silver	1.35E+01					0.00E+00	0%
6	217	1	Surface	Uranium-238	1.15E+00	8.48E-09		2.44E-10	1.26E-07	1.35E-07	20%
6	**217**	**1**	**Surface**	**Totals**		**8.48E-09**		**5.33E-07**	**1.26E-07**	**6.67E-07**	
6	**217**	**1**	**Surface**	**Percent**		**1%**		**80%**	**19%**		
6	217	2	Surface	Antimony	1.70E+00					0.00E+00	0%
6	217	2	Surface	Arsenic	1.12E+01	5.33E-07	5.76E-06	3.46E-09		6.30E-06	50%
6	217	2	Surface	Chromium	1.02E+02			6.14E-07		6.14E-07	5%
6	217	2	Surface	Cobalt	1.74E+01			1.13E-08		1.13E-08	0%
6	217	2	Surface	Iron	3.09E+04					0.00E+00	0%
6	217	2	Surface	Manganese	8.44E+02					0.00E+00	0%
6	217	2	Surface	Mercury	8.59E+00					0.00E+00	0%
6	217	2	Surface	Nickel	9.74E+01			1.82E-09		1.82E-09	0%
6	217	2	Surface	Silver	1.61E+01					0.00E+00	0%
6	217	2	Surface	Total PAH	5.05E-01	1.17E-07	5.50E-06	2.39E-09		5.62E-06	45%
6	**217**	**2**	**Surface**	**Totals**		**6.51E-07**	**1.13E-05**	**6.33E-07**		**1.25E-05**	
6	**217**	**2**	**Surface**	**Percent**		**5%**	**90%**	**5%**			
6	221	1	Surface	Barium	2.21E+02					0.00E+00	0%
6	221	1	Surface	Chromium	7.01E+01			4.24E-07		4.24E-07	3%
6	221	1	Surface	Iron	1.90E+04					0.00E+00	0%
6	221	1	Surface	Nickel	7.93E+01			1.48E-09		1.48E-09	0%
6	221	1	Surface	PCB, Total	5.00E-01	3.19E-08	1.61E-06	3.49E-08		1.67E-06	12%
6	221	1	Surface	Total PAH	1.02E+00	2.38E-07	1.11E-05	4.84E-09		1.14E-05	83%
6	221	1	Surface	Uranium	1.64E+01					0.00E+00	0%
6	221	1	Surface	Uranium-238	1.93E+00	1.42E-08		4.07E-10	2.11E-07	2.26E-07	2%
6	**221**	**1**	**Surface**	**Totals**		**2.84E-07**	**1.27E-05**	**4.65E-07**	**2.11E-07**	**1.37E-05**	
6	**221**	**1**	**Surface**	**Percent**		**2%**	**93%**	**3%**	**2%**		
6	222	1	Surface	Chromium	4.73E+01			2.86E-07		2.86E-07	3%
6	222	1	Surface	Nickel	9.19E+01			1.72E-09		1.72E-09	0%
6	222	1	Surface	PCB, Total	1.40E+00	8.92E-08	4.50E-06	9.77E-08		4.68E-06	48%
6	222	1	Surface	Total PAH	1.77E-01	4.12E-08	1.93E-06	8.38E-10		1.97E-06	20%
6	222	1	Surface	Uranium	2.80E+01					0.00E+00	0%
6	222	1	Surface	Uranium-234	1.04E+01	5.75E-08		2.68E-09	2.51E-09	6.27E-08	1%
6	222	1	Surface	Uranium-235	7.10E-01	4.05E-09		1.62E-10	3.70E-07	3.74E-07	4%
6	222	1	Surface	Uranium-238	1.96E+01	1.44E-07		4.14E-09	2.14E-06	2.29E-06	24%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
6	**222**	**1**	**Surface**	**Totals**		**3.36E-07**	**6.42E-06**	**3.93E-07**	**2.51E-06**	**9.67E-06**	
6	**222**	**1**	**Surface**	**Percent**		**3%**	**66%**	**4%**	**26%**		
6	227	1	Surface	Beryllium	5.52E-01			9.53E-11		9.53E-11	0%
6	227	1	Surface	Cesium-137	1.90E-01	2.88E-10		5.11E-14	4.63E-07	4.63E-07	2%
6	227	1	Surface	Chromium	4.71E+01			2.85E-07		2.85E-07	1%
6	227	1	Surface	Cobalt-60	1.53E-02	2.16E-11		1.24E-14	1.82E-07	1.82E-07	1%
6	227	1	Surface	Neptunium-237	9.05E-01	5.13E-09		3.62E-10	6.91E-07	6.96E-07	3%
6	227	1	Surface	Nickel	2.03E+02			3.80E-09		3.80E-09	0%
6	227	1	Surface	PCB, Total	4.14E+00	2.64E-07	1.33E-05	2.89E-07		1.39E-05	54%
6	227	1	Surface	Technetium-99	4.77E+01	1.28E-08		1.52E-11	3.72E-09	1.65E-08	0%
6	227	1	Surface	Total PAH	3.38E-01	7.86E-08	3.68E-06	1.60E-09		3.76E-06	15%
6	227	1	Surface	Uranium	1.02E+02					0.00E+00	0%
6	227	1	Surface	Uranium-234	1.54E+01	8.54E-08		3.97E-09	3.73E-09	9.31E-08	0%
6	227	1	Surface	Uranium-235	1.49E+00	8.50E-09		3.40E-10	7.76E-07	7.85E-07	3%
6	227	1	Surface	Uranium-238	4.63E+01	3.40E-07		9.77E-09	5.06E-06	5.41E-06	21%
6	**227**	**1**	**Surface**	**Totals**		**7.95E-07**	**1.70E-05**	**5.94E-07**	**7.18E-06**	**2.55E-05**	
6	**227**	**1**	**Surface**	**Percent**		**3%**	**66%**	**2%**	**28%**		
6	227	2	Surface	Beryllium	5.32E-01			9.18E-11		9.18E-11	0%
6	227	2	Surface	Chromium	5.63E+01			3.40E-07		3.40E-07	2%
6	227	2	Surface	Cobalt	8.99E+00			5.82E-09		5.82E-09	0%
6	227	2	Surface	Cobalt-60	1.37E-02	1.93E-11		1.11E-14	1.63E-07	1.63E-07	1%
6	227	2	Surface	Mercury	8.41E+00					0.00E+00	0%
6	227	2	Surface	Nickel	1.25E+02			2.34E-09		2.34E-09	0%
6	227	2	Surface	PCB, Total	5.82E+00	3.71E-07	1.87E-05	4.06E-07		1.95E-05	91%
6	227	2	Surface	Total PAH	1.16E-01	2.69E-08	1.26E-06	5.47E-10		1.29E-06	6%
6	227	2	Surface	Uranium	1.51E+01					0.00E+00	0%
6	227	2	Surface	Uranium-238	1.57E+00	1.16E-08		3.32E-10	1.72E-07	1.84E-07	1%
6	**227**	**2**	**Surface**	**Totals**		**4.09E-07**	**2.00E-05**	**7.56E-07**	**3.35E-07**	**2.15E-05**	
6	**227**	**2**	**Surface**	**Percent**		**2%**	**93%**	**4%**	**2%**		
6	228	1	Surface	Antimony	6.30E-01					0.00E+00	0%
6	228	1	Surface	Cadmium	3.90E+00			5.05E-10		5.05E-10	0%
6	228	1	Surface	Chromium	1.89E+02			1.14E-06		1.14E-06	38%
6	228	1	Surface	Mercury	9.37E+00					0.00E+00	0%
6	228	1	Surface	Neptunium-237	8.00E-01	4.54E-09		3.20E-10	6.11E-07	6.15E-07	20%
6	228	1	Surface	Nickel	7.92E+01			1.48E-09		1.48E-09	0%
6	228	1	Surface	Silver	1.16E+01					0.00E+00	0%
6	228	1	Surface	Total PAH	6.69E-02	1.56E-08	7.28E-07	3.16E-10		7.44E-07	24%
6	228	1	Surface	Uranium	1.51E+01					0.00E+00	0%
6	228	1	Surface	Uranium-235	1.78E-01	1.02E-09		4.06E-11	9.27E-08	9.37E-08	3%
6	228	1	Surface	Uranium-238	3.77E+00	2.77E-08		7.96E-10	4.12E-07	4.41E-07	15%
6	**228**	**1**	**Surface**	**Totals**		**4.88E-08**	**7.28E-07**	**1.14E-06**	**1.12E-06**	**3.04E-06**	
6	**228**	**1**	**Surface**	**Percent**		**2%**	**24%**	**38%**	**37%**		
7	76	1	Surface	Barium	2.69E+02					0.00E+00	0%
7	76	1	Surface	PCB, Total	2.60E-01	1.66E-08	8.35E-07	1.81E-08		8.70E-07	4%
7	76	1	Surface	Total PAH	1.76E+00	4.09E-07	1.91E-05	8.32E-09		1.96E-05	95%
7	76	1	Surface	Uranium-238	1.45E+00	1.07E-08		3.06E-10	1.59E-07	1.69E-07	1%
7	**76**	**1**	**Surface**	**Totals**		**4.36E-07**	**2.00E-05**	**2.68E-08**	**1.59E-07**	**2.06E-05**	
7	**76**	**1**	**Surface**	**Percent**		**2%**	**97%**	**0%**	**1%**		
7	165	1	Surface	Antimony	2.20E+00					0.00E+00	0%
7	165	1	Surface	Arsenic	6.35E+01	3.03E-06	3.28E-05	1.97E-08		3.58E-05	35%
7	165	1	Surface	Barium	5.84E+02					0.00E+00	0%
7	165	1	Surface	Beryllium	6.82E-01			1.18E-10		1.18E-10	0%
7	165	1	Surface	Cesium-137	3.47E+00	5.26E-09		9.33E-13	8.45E-06	8.46E-06	8%
7	165	1	Surface	Chromium	3.74E+01			2.26E-07		2.26E-07	0%
7	165	1	Surface	Mercury	3.78E-01					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
7	165	1	Surface	Naphthalene	1.61E+00			1.32E-07		1.32E-07	0%
7	165	1	Surface	Neptunium-237	4.26E-01	2.42E-09		1.70E-10	3.25E-07	3.28E-07	0%
7	165	1	Surface	Nickel	3.47E+01			6.49E-10		6.49E-10	0%
7	165	1	Surface	PCB, Total	8.27E+00	5.27E-07	2.66E-05	5.77E-07		2.77E-05	27%
7	165	1	Surface	Plutonium-239/240	2.81E+00	2.71E-08		2.11E-09	5.38E-10	2.97E-08	0%
7	165	1	Surface	Silver	3.09E+01					0.00E+00	0%
7	165	1	Surface	Thorium-230	6.02E+00	4.25E-08		3.87E-09	4.73E-09	5.11E-08	0%
7	165	1	Surface	Total PAH	1.87E+00	4.34E-07	2.03E-05	8.84E-09		2.08E-05	20%
7	165	1	Surface	Uranium	1.08E+02					0.00E+00	0%
7	165	1	Surface	Uranium-234	5.76E+01	3.18E-07		1.48E-08	1.39E-08	3.47E-07	0%
7	165	1	Surface	Uranium-235	2.05E+00	1.17E-08		4.66E-10	1.06E-06	1.08E-06	1%
7	165	1	Surface	Uranium-238	6.41E+01	4.71E-07		1.35E-08	7.01E-06	7.49E-06	7%
7	**165**	**1**	**Surface**	**Totals**		**4.87E-06**	**7.97E-05**	**1.00E-06**	**1.69E-05**	**1.02E-04**	
7	**165**	**1**	**Surface**	**Percent**		**5%**	**78%**	**1%**	**16%**		
7	170	1	Surface	Neptunium-237	1.15E-01	6.52E-10		4.60E-11	8.78E-08	8.85E-08	33%
7	170	1	Surface	Uranium-238	1.53E+00	1.12E-08		3.23E-10	1.67E-07	1.79E-07	67%
7	**170**	**1**	**Surface**	**Totals**		**1.19E-08**		**3.69E-10**	**2.55E-07**	**2.67E-07**	
7	**170**	**1**	**Surface**	**Percent**		**4%**		**0%**	**95%**		
8	158	1	Surface	Antimony	5.23E-01					0.00E+00	0%
8	158	1	Surface	Arsenic	1.01E+01	4.84E-07	5.22E-06	3.14E-09		5.71E-06	53%
8	158	1	Surface	Barium	2.19E+02					0.00E+00	0%
8	158	1	Surface	Chromium	6.07E+01			3.67E-07		3.67E-07	3%
8	158	1	Surface	Cobalt	1.62E+01			1.05E-08		1.05E-08	0%
8	158	1	Surface	Manganese	9.91E+02					0.00E+00	0%
8	158	1	Surface	Mercury	1.05E+01					0.00E+00	0%
8	158	1	Surface	Nickel	7.28E+01			1.36E-09		1.36E-09	0%
8	158	1	Surface	Thallium	3.12E-01					0.00E+00	0%
8	158	1	Surface	Total PAH	3.69E-01	8.58E-08	4.02E-06	1.75E-09		4.10E-06	38%
8	158	1	Surface	Uranium	2.03E+01					0.00E+00	0%
8	158	1	Surface	Uranium-235	1.63E-01	9.30E-10		3.72E-11	8.49E-08	8.58E-08	1%
8	158	1	Surface	Uranium-238	3.79E+00	2.79E-08		8.00E-10	4.14E-07	4.43E-07	4%
8	**158**	**1**	**Surface**	**Totals**		**5.98E-07**	**9.24E-06**	**3.85E-07**	**4.99E-07**	**1.07E-05**	
8	**158**	**1**	**Surface**	**Percent**		**6%**	**86%**	**4%**	**5%**		
8	169	1	Surface	Aluminum	1.42E+04					0.00E+00	0%
8	169	1	Surface	Antimony	1.30E+00					0.00E+00	0%
8	169	1	Surface	Arsenic	2.03E+01	9.70E-07	1.05E-05	6.30E-09		1.15E-05	12%
8	169	1	Surface	Beryllium	8.00E-01			1.38E-10		1.38E-10	0%
8	169	1	Surface	Chromium	2.15E+02			1.30E-06		1.30E-06	1%
8	169	1	Surface	Copper	3.74E+02					0.00E+00	0%
8	169	1	Surface	Iron	4.16E+04					0.00E+00	0%
8	169	1	Surface	Mercury	7.87E+00					0.00E+00	0%
8	169	1	Surface	Nickel	5.49E+02			1.03E-08		1.03E-08	0%
8	169	1	Surface	PCB, Total	1.00E+01	6.37E-07	3.21E-05	6.98E-07		3.34E-05	34%
8	169	1	Surface	Thallium	4.60E-01					0.00E+00	0%
8	169	1	Surface	Total PAH	4.59E+00	1.07E-06	4.99E-05	2.17E-08		5.10E-05	52%
8	169	1	Surface	Uranium	5.03E+01					0.00E+00	0%
8	169	1	Surface	Uranium-234	6.55E+00	3.62E-08		1.69E-09	1.58E-09	3.95E-08	0%
8	169	1	Surface	Uranium-235	4.60E-01	2.62E-09		1.05E-10	2.40E-07	2.42E-07	0%
8	169	1	Surface	Uranium-238	8.12E+00	5.97E-08		1.71E-09	8.88E-07	9.49E-07	1%
8	**169**	**1**	**Surface**	**Totals**		**2.77E-06**	**9.25E-05**	**2.04E-06**	**1.13E-06**	**9.84E-05**	
8	**169**	**1**	**Surface**	**Percent**		**3%**	**94%**	**2%**	**1%**		
9	19	1	Surface	Beryllium	1.10E+00			1.90E-10		1.90E-10	0%
9	19	1	Surface	Cadmium	1.20E+00			1.55E-10		1.55E-10	0%
9	19	1	Surface	Thallium	9.80E-01					0.00E+00	0%
9	19	1	Surface	Total PAH	5.23E+00	1.22E-06	5.69E-05	2.47E-08		5.81E-05	100%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**19**	**1**	**Surface**	**Totals**		**1.22E-06**	**5.69E-05**	**2.51E-08**		**5.81E-05**	
9	**19**	**1**	**Surface**	**Percent**		**2%**	**98%**	**0%**			
9	138	1	Surface	Antimony	5.39E+00					0.00E+00	0%
9	138	1	Surface	Arsenic	1.06E+01	5.07E-07	5.48E-06	3.30E-09		5.99E-06	66%
9	138	1	Surface	Cadmium	5.42E+00			7.02E-10		7.02E-10	0%
9	138	1	Surface	Chromium	5.39E+01			3.25E-07		3.25E-07	4%
9	138	1	Surface	Mercury	1.30E+01					0.00E+00	0%
9	138	1	Surface	Nickel	7.04E+01			1.32E-09		1.32E-09	0%
9	138	1	Surface	PCB, Total	5.00E-01	3.19E-08	1.61E-06	3.49E-08		1.67E-06	18%
9	138	1	Surface	Silver	1.01E+01					0.00E+00	0%
9	138	1	Surface	Total PAH	9.74E-02	2.27E-08	1.06E-06	4.61E-10		1.08E-06	12%
9	**138**	**1**	**Surface**	**Totals**		**5.62E-07**	**8.15E-06**	**3.66E-07**		**9.07E-06**	
9	**138**	**1**	**Surface**	**Percent**		**6%**	**90%**	**4%**			
9	138	2	Surface	Nickel	7.99E+01			1.49E-09		1.49E-09	0%
9	138	2	Surface	PCB, Total	9.20E-02	5.86E-09	2.95E-07	6.42E-09		3.08E-07	42%
9	138	2	Surface	Silver	1.04E+01					0.00E+00	0%
9	138	2	Surface	Total PAH	3.84E-02	8.93E-09	4.18E-07	1.82E-10		4.27E-07	58%
9	**138**	**2**	**Surface**	**Totals**		**1.48E-08**	**7.13E-07**	**8.10E-09**		**7.36E-07**	
9	**138**	**2**	**Surface**	**Percent**		**2%**	**97%**	**1%**			
9	180	1	Surface	Antimony	5.80E-01					0.00E+00	0%
9	180	1	Surface	Arsenic	7.48E+01	3.57E-06	3.86E-05	2.32E-08		4.22E-05	99%
9	180	1	Surface	Chromium	5.54E+01			3.35E-07		3.35E-07	1%
9	180	1	Surface	Mercury	8.28E+00					0.00E+00	0%
9	180	1	Surface	Nickel	8.77E+01			1.64E-09		1.64E-09	0%
9	**180**	**1**	**Surface**	**Totals**		**3.57E-06**	**3.86E-05**	**3.60E-07**		**4.25E-05**	
9	**180**	**1**	**Surface**	**Percent**		**8%**	**91%**	**1%**			
9	180	2	Surface	Antimony	4.58E-01					0.00E+00	0%
9	180	2	Surface	Arsenic	1.27E+01	6.04E-07	6.53E-06	3.93E-09		7.14E-06	85%
9	180	2	Surface	Chromium	4.46E+01			2.70E-07		2.70E-07	3%
9	180	2	Surface	Nickel	8.42E+01			1.57E-09		1.57E-09	0%
9	180	2	Surface	Total PAH	9.19E-02	2.14E-08	1.00E-06	4.34E-10		1.02E-06	12%
9	**180**	**2**	**Surface**	**Totals**		**6.26E-07**	**7.53E-06**	**2.76E-07**		**8.43E-06**	
9	**180**	**2**	**Surface**	**Percent**		**7%**	**89%**	**3%**			
9	180	3	Surface	Arsenic	1.34E+01	6.38E-07	6.89E-06	4.14E-09		7.53E-06	96%
9	180	3	Surface	Chromium	4.69E+01			2.84E-07		2.84E-07	4%
9	180	3	Surface	Nickel	6.77E+01			1.27E-09		1.27E-09	0%
9	180	3	Surface	Silver	1.14E+01					0.00E+00	0%
9	**180**	**3**	**Surface**	**Totals**		**6.38E-07**	**6.89E-06**	**2.89E-07**		**7.82E-06**	
9	**180**	**3**	**Surface**	**Percent**		**8%**	**88%**	**4%**			
9	180	4	Surface	Arsenic	1.15E+01	5.51E-07	5.95E-06	3.58E-09		6.51E-06	92%
9	180	4	Surface	Barium	2.13E+02					0.00E+00	0%
9	180	4	Surface	Beryllium	1.60E+00			2.76E-10		2.76E-10	0%
9	180	4	Surface	Chromium	6.00E+01			3.63E-07		3.63E-07	5%
9	180	4	Surface	Iron	1.54E+04					0.00E+00	0%
9	180	4	Surface	Manganese	7.09E+02					0.00E+00	0%
9	180	4	Surface	Nickel	6.46E+01			1.21E-09		1.21E-09	0%
9	180	4	Surface	Silver	9.68E+00					0.00E+00	0%
9	180	4	Surface	Total PAH	2.15E-02	5.00E-09	2.34E-07	1.02E-10		2.39E-07	3%
9	180	4	Surface	Vanadium	4.85E+01					0.00E+00	0%
9	**180**	**4**	**Surface**	**Totals**		**5.56E-07**	**6.18E-06**	**3.68E-07**		**7.11E-06**	
9	**180**	**4**	**Surface**	**Percent**		**8%**	**87%**	**5%**			
9	181	1	Surface	Chromium	2.29E+01			1.38E-07		1.38E-07	27%
9	181	1	Surface	Thallium	3.50E+00					0.00E+00	0%
9	181	1	Surface	Total PAH	3.43E-02	7.98E-09	3.73E-07	1.62E-10		3.81E-07	73%
9	**181**	**1**	**Surface**	**Totals**		**7.98E-09**	**3.73E-07**	**1.38E-07**		**5.20E-07**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**181**	**1**	**Surface**	**Percent**		**2%**	**72%**	**27%**			
9	195	1	Surface	Chromium	6.33E+01			3.82E-07		3.82E-07	100%
9	195	1	Surface	Nickel	7.02E+01			1.31E-09		1.31E-09	0%
9	195	1	Surface	Silver	9.37E+00					0.00E+00	0%
9	**195**	**1**	**Surface**	**Totals**				**3.84E-07**		**3.84E-07**	
9	**195**	**1**	**Surface**	**Percent**				**100%**			
9	195	2	Surface	Chromium	4.52E+01			2.73E-07		2.73E-07	48%
9	195	2	Surface	Silver	9.48E+00					0.00E+00	0%
9	195	2	Surface	Total PAH	2.68E-02	6.23E-09	2.92E-07	1.27E-10		2.98E-07	52%
9	**195**	**2**	**Surface**	**Totals**		**6.23E-09**	**2.92E-07**	**2.73E-07**		**5.71E-07**	
9	**195**	**2**	**Surface**	**Percent**		**1%**	**51%**	**48%**			
9	195	3	Surface	Chromium	5.03E+01			3.04E-07		3.04E-07	40%
9	195	3	Surface	Nickel	5.22E+01			9.75E-10		9.75E-10	0%
9	195	3	Surface	Total PAH	4.06E-02	9.44E-09	4.42E-07	1.92E-10		4.52E-07	60%
9	**195**	**3**	**Surface**	**Totals**		**9.44E-09**	**4.42E-07**	**3.05E-07**		**7.56E-07**	
9	**195**	**3**	**Surface**	**Percent**		**1%**	**58%**	**40%**			
9	195	4	Surface	Chromium	5.29E+01			3.20E-07		3.20E-07	100%
9	195	4	Surface	Nickel	6.23E+01			1.16E-09		1.16E-09	0%
9	**195**	**4**	**Surface**	**Totals**				**3.21E-07**		**3.21E-07**	
9	**195**	**4**	**Surface**	**Percent**				**100%**			
9	195	5	Surface	Chromium	5.74E+01			3.47E-07		3.47E-07	56%
9	195	5	Surface	Nickel	8.11E+01			1.52E-09		1.52E-09	0%
9	195	5	Surface	Total PAH	2.40E-02	5.58E-09	2.61E-07	1.14E-10		2.67E-07	43%
9	**195**	**5**	**Surface**	**Totals**		**5.58E-09**	**2.61E-07**	**3.49E-07**		**6.15E-07**	
9	**195**	**5**	**Surface**	**Percent**		**1%**	**42%**	**57%**			
9	195	6	Surface	Chromium	4.45E+01			2.69E-07		2.69E-07	9%
9	195	6	Surface	Nickel	8.71E+01			1.63E-09		1.63E-09	0%
9	195	6	Surface	Total PAH	2.48E-01	5.76E-08	2.70E-06	1.17E-09		2.75E-06	91%
9	**195**	**6**	**Surface**	**Totals**		**5.76E-08**	**2.70E-06**	**2.72E-07**		**3.03E-06**	
9	**195**	**6**	**Surface**	**Percent**		**2%**	**89%**	**9%**			
9	195	7	Surface	Chromium	4.93E+01			2.98E-07		2.98E-07	100%
9	195	7	Surface	Silver	8.06E+00					0.00E+00	0%
9	**195**	**7**	**Surface**	**Totals**				**2.98E-07**		**2.98E-07**	
9	**195**	**7**	**Surface**	**Percent**				**100%**			
9	195	8	Surface	Arsenic	1.16E+01	5.52E-07	5.97E-06	3.59E-09		6.52E-06	70%
9	195	8	Surface	Beryllium	7.40E-01			1.28E-10		1.28E-10	0%
9	195	8	Surface	Chromium	6.79E+01			4.10E-07		4.10E-07	4%
9	195	8	Surface	Cobalt	1.82E+01			1.18E-08		1.18E-08	0%
9	195	8	Surface	Nickel	7.01E+01			1.31E-09		1.31E-09	0%
9	195	8	Surface	Total PAH	2.16E-01	5.01E-08	2.35E-06	1.02E-09		2.40E-06	26%
9	195	8	Surface	Vanadium	4.04E+01					0.00E+00	0%
9	**195**	**8**	**Surface**	**Totals**		**6.03E-07**	**8.31E-06**	**4.28E-07**		**9.34E-06**	
9	**195**	**8**	**Surface**	**Percent**		**6%**	**89%**	**5%**			
9	195	9	Surface	Chromium	6.08E+01			3.67E-07		3.67E-07	100%
9	195	9	Surface	Nickel	7.93E+01			1.48E-09		1.48E-09	0%
9	**195**	**9**	**Surface**	**Totals**				**3.69E-07**		**3.69E-07**	
9	**195**	**9**	**Surface**	**Percent**				**100%**			
9	195	10	Surface	Chromium	4.51E+01			2.72E-07		2.72E-07	99%
9	195	10	Surface	Nickel	7.40E+01			1.38E-09		1.38E-09	1%
9	195	10	Surface	Silver	1.31E+01					0.00E+00	0%
9	**195**	**10**	**Surface**	**Totals**				**2.74E-07**		**2.74E-07**	
9	**195**	**10**	**Surface**	**Percent**				**100%**			
9	195	11	Surface	Aluminum	2.81E+04					0.00E+00	0%
9	195	11	Surface	Arsenic	1.35E+01	6.43E-07	6.95E-06	4.18E-09		7.59E-06	96%
9	195	11	Surface	Barium	4.53E+02					0.00E+00	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	195	11	Surface	Chromium	5.05E+01			3.05E-07		3.05E-07	4%
9	195	11	Surface	Cobalt	2.77E+01			1.79E-08		1.79E-08	0%
9	195	11	Surface	Iron	1.97E+04					0.00E+00	0%
9	195	11	Surface	Nickel	6.77E+01			1.27E-09		1.27E-09	0%
9	195	11	Surface	Thallium	6.60E-01					0.00E+00	0%
9	195	11	Surface	Vanadium	7.97E+01					0.00E+00	0%
9	**195**	**11**	**Surface**	**Totals**		**6.43E-07**	**6.95E-06**	**3.29E-07**		**7.92E-06**	
9	**195**	**11**	**Surface**	**Percent**		**8%**	**88%**	**4%**			
9	195	12	Surface	Beryllium	7.50E-01			1.29E-10		1.29E-10	0%
9	195	12	Surface	Chromium	7.04E+01			4.25E-07		4.25E-07	100%
9	195	12	Surface	Nickel	6.78E+01			1.27E-09		1.27E-09	0%
9	**195**	**12**	**Surface**	**Totals**				**4.27E-07**		**4.27E-07**	
9	**195**	**12**	**Surface**	**Percent**				**100%**			
9	195	13	Surface	Chromium	6.55E+01			3.96E-07		3.96E-07	100%
9	195	13	Surface	Nickel	6.91E+01			1.29E-09		1.29E-09	0%
9	**195**	**13**	**Surface**	**Totals**				**3.97E-07**		**3.97E-07**	
9	**195**	**13**	**Surface**	**Percent**				**100%**			
9	195	14	Surface	Chromium	5.94E+01			3.59E-07		3.59E-07	100%
9	195	14	Surface	Nickel	7.04E+01			1.32E-09		1.32E-09	0%
9	**195**	**14**	**Surface**	**Totals**				**3.60E-07**		**3.60E-07**	
9	**195**	**14**	**Surface**	**Percent**				**100%**			
9	195	15	Surface	Chromium	4.82E+01			2.91E-07		2.91E-07	100%
9	**195**	**15**	**Surface**	**Totals**				**2.91E-07**		**2.91E-07**	
9	**195**	**15**	**Surface**	**Percent**				**100%**			
9	195	16	Surface	Chromium	4.45E+01			2.69E-07		2.69E-07	99%
9	195	16	Surface	Nickel	8.16E+01			1.53E-09		1.53E-09	1%
9	**195**	**16**	**Surface**	**Totals**				**2.70E-07**		**2.70E-07**	
9	**195**	**16**	**Surface**	**Percent**				**100%**			
9	195	17	Surface	Chromium	8.22E+01			4.97E-07		4.97E-07	7%
9	195	17	Surface	Mercury	4.17E-01					0.00E+00	0%
9	195	17	Surface	Nickel	5.93E+01			1.11E-09		1.11E-09	0%
9	195	17	Surface	PCB, Total	7.40E-01	4.71E-08	2.38E-06	5.17E-08		2.48E-06	36%
9	195	17	Surface	Silver	1.01E+01					0.00E+00	0%
9	195	17	Surface	Thallium	5.40E-01					0.00E+00	0%
9	195	17	Surface	Total PAH	3.16E-01	7.35E-08	3.44E-06	1.49E-09		3.51E-06	51%
9	195	17	Surface	Uranium-235	1.32E-01	7.53E-10		3.01E-11	6.87E-08	6.95E-08	1%
9	195	17	Surface	Uranium-238	2.48E+00	1.82E-08		5.24E-10	2.71E-07	2.90E-07	4%
9	**195**	**17**	**Surface**	**Totals**		**1.40E-07**	**5.81E-06**	**5.51E-07**	**3.40E-07**	**6.85E-06**	
9	**195**	**17**	**Surface**	**Percent**		**2%**	**85%**	**8%**	**5%**		
9	486	1	Surface	Cesium-137	1.71E+00	2.59E-09		4.59E-13	4.16E-06	4.17E-06	100%
9	**486**	**1**	**Surface**	**Totals**		**2.59E-09**		**4.59E-13**	**4.16E-06**	**4.17E-06**	
9	**486**	**1**	**Surface**	**Percent**		**0%**		**0%**	**100%**		
9	487	1	Surface	Cesium-137	1.38E+00	2.09E-09		3.71E-13	3.36E-06	3.36E-06	100%
9	**487**	**1**	**Surface**	**Totals**		**2.09E-09**		**3.71E-13**	**3.36E-06**	**3.36E-06**	
9	**487**	**1**	**Surface**	**Percent**		**0%**		**0%**	**100%**		
9	492	1	Surface	Arsenic	1.47E+01	7.02E-07	7.59E-06	4.56E-09		8.29E-06	4%
9	492	1	Surface	Beryllium	1.04E+01			1.80E-09		1.80E-09	0%
9	492	1	Surface	Cadmium	3.14E+00			4.07E-10		4.07E-10	0%
9	492	1	Surface	Chromium	1.04E+03			6.28E-06		6.28E-06	3%
9	492	1	Surface	Cobalt-60	9.63E-03	1.36E-11		7.78E-15	1.15E-07	1.15E-07	0%
9	492	1	Surface	Neptunium-237	2.09E-01	1.19E-09		8.35E-11	1.60E-07	1.61E-07	0%
9	492	1	Surface	PCB, Total	4.41E+01	2.81E-06	1.42E-04	3.08E-06		1.48E-04	70%
9	492	1	Surface	Uranium	1.77E+03					0.00E+00	0%
9	492	1	Surface	Uranium-234	5.39E+01	2.98E-07		1.39E-08	1.30E-08	3.25E-07	0%
9	492	1	Surface	Uranium-235	5.72E+00	3.26E-08		1.30E-09	2.98E-06	3.01E-06	1%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	492	1	Surface	Uranium-238	3.83E+02	2.82E-06		8.09E-08	4.19E-05	4.48E-05	21%
9	492	1	Surface	Vanadium	4.32E+01					0.00E+00	0%
9	**492**	**1**	**Surface**	**Totals**		**6.66E-06**	**1.49E-04**	**9.47E-06**	**4.51E-05**	**2.10E-04**	
9	**492**	**1**	**Surface**	**Percent**		**3%**	**71%**	**4%**	**21%**		
9	493	1	Surface	Aluminum	1.44E+04					0.00E+00	0%
9	493	1	Surface	Barium	4.04E+02					0.00E+00	0%
9	493	1	Surface	Beryllium	9.91E-01			1.71E-10		1.71E-10	0%
9	493	1	Surface	Chromium	6.61E+01			3.99E-07		3.99E-07	5%
9	493	1	Surface	Cobalt	3.79E+01			2.45E-08		2.45E-08	0%
9	493	1	Surface	Cobalt-60	1.36E-02	1.92E-11		1.10E-14	1.62E-07	1.62E-07	2%
9	493	1	Surface	Manganese	3.55E+03					0.00E+00	0%
9	493	1	Surface	Mercury	2.60E-01					0.00E+00	0%
9	493	1	Surface	Neptunium-237	1.22E-01	6.92E-10		4.88E-11	9.31E-08	9.39E-08	1%
9	493	1	Surface	Nickel	2.13E+02			3.98E-09		3.98E-09	0%
9	493	1	Surface	PCB, Total	2.60E-01	1.66E-08	8.35E-07	1.81E-08		8.70E-07	11%
9	493	1	Surface	Total PAH	5.00E-01	1.16E-07	5.44E-06	2.36E-09		5.56E-06	71%
9	493	1	Surface	Uranium-235	1.65E-01	9.41E-10		3.76E-11	8.59E-08	8.69E-08	1%
9	493	1	Surface	Uranium-238	5.50E+00	4.04E-08		1.16E-09	6.01E-07	6.43E-07	8%
9	493	1	Surface	Vanadium	4.05E+01					0.00E+00	0%
9	**493**	**1**	**Surface**	**Totals**		**1.75E-07**	**6.28E-06**	**4.50E-07**	**9.42E-07**	**7.84E-06**	
9	**493**	**1**	**Surface**	**Percent**		**2%**	**80%**	**6%**	**12%**		
9	517	1	Surface	Beryllium	7.39E-01			1.28E-10		1.28E-10	0%
9	517	1	Surface	Chromium	4.91E+01			2.97E-07		2.97E-07	9%
9	517	1	Surface	Cobalt-60	6.39E-03	9.01E-12		5.17E-15	7.60E-08	7.60E-08	2%
9	517	1	Surface	Neptunium-237	1.07E+00	6.07E-09		4.28E-10	8.17E-07	8.23E-07	24%
9	517	1	Surface	Nickel	1.72E+02			3.22E-09		3.22E-09	0%
9	517	1	Surface	PCB, Total	5.00E-01	3.19E-08	1.61E-06	3.49E-08		1.67E-06	49%
9	517	1	Surface	Uranium-235	1.60E-01	9.13E-10		3.65E-11	8.33E-08	8.43E-08	2%
9	517	1	Surface	Uranium-238	3.89E+00	2.86E-08		8.21E-10	4.25E-07	4.55E-07	13%
9	**517**	**1**	**Surface**	**Totals**		**6.74E-08**	**1.61E-06**	**3.36E-07**	**1.40E-06**	**3.41E-06**	
9	**517**	**1**	**Surface**	**Percent**		**2%**	**47%**	**10%**	**41%**		
9	541	1	Surface	Aluminum	1.43E+04					0.00E+00	0%
9	541	1	Surface	Americium-241	7.53E+00	5.72E-08		4.78E-09	1.99E-07	2.61E-07	0%
9	541	1	Surface	Barium	1.28E+02					0.00E+00	0%
9	541	1	Surface	Beryllium	6.98E-01			1.21E-10		1.21E-10	0%
9	541	1	Surface	Cadmium	1.68E+00			2.18E-10		2.18E-10	0%
9	541	1	Surface	Cesium-137	9.58E-01	1.45E-09		2.57E-13	2.33E-06	2.33E-06	1%
9	541	1	Surface	Chromium	8.24E+02			4.98E-06		4.98E-06	1%
9	541	1	Surface	Cobalt-60	1.01E-02	1.42E-11		8.16E-15	1.20E-07	1.20E-07	0%
9	541	1	Surface	Iron	1.60E+04					0.00E+00	0%
9	541	1	Surface	Mercury	9.81E-02					0.00E+00	0%
9	541	1	Surface	Naphthalene	6.55E-01			5.38E-08		5.38E-08	0%
9	541	1	Surface	Neptunium-237	5.52E-02	3.13E-10		2.21E-11	4.21E-08	4.25E-08	0%
9	541	1	Surface	Nickel	1.52E+01			2.85E-10		2.85E-10	0%
9	541	1	Surface	PCB, Total	6.06E+01	3.86E-06	1.95E-04	4.23E-06		2.03E-04	56%
9	541	1	Surface	Total PAH	2.33E+00	5.42E-07	2.53E-05	1.10E-08		2.59E-05	7%
9	541	1	Surface	Uranium	6.38E+03					0.00E+00	0%
9	541	1	Surface	Uranium-234	1.43E+02	7.90E-07		3.68E-08	3.45E-08	8.62E-07	0%
9	541	1	Surface	Uranium-235	1.76E+01	1.00E-07		4.00E-09	9.14E-06	9.25E-06	3%
9	541	1	Surface	Uranium-238	1.00E+03	7.36E-06		2.11E-07	1.09E-04	1.17E-04	32%
9	541	1	Surface	Vanadium	3.04E+01					0.00E+00	0%
9	**541**	**1**	**Surface**	**Totals**		**1.27E-05**	**2.20E-04**	**9.53E-06**	**1.21E-04**	**3.64E-04**	
9	**541**	**1**	**Surface**	**Percent**		**3%**	**61%**	**3%**	**33%**		
9	561	1	Surface	Antimony	9.36E-01					0.00E+00	0%
9	561	1	Surface	Arsenic	1.66E+01	7.91E-07	8.54E-06	5.14E-09		9.34E-06	29%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	561	1	Surface	Barium	1.40E+02					0.00E+00	0%
9	561	1	Surface	Beryllium	6.85E-01			1.18E-10		1.18E-10	0%
9	561	1	Surface	Chromium	8.58E+01			5.18E-07		5.18E-07	2%
9	561	1	Surface	Cobalt	1.07E+01			6.92E-09		6.92E-09	0%
9	561	1	Surface	Cobalt-60	7.06E-02	9.96E-11		5.71E-14	8.39E-07	8.40E-07	3%
9	561	1	Surface	Iron	2.05E+04					0.00E+00	0%
9	561	1	Surface	Manganese	1.61E+03					0.00E+00	0%
9	561	1	Surface	Neptunium-237	2.71E-02	1.54E-10		1.08E-11	2.07E-08	2.08E-08	0%
9	561	1	Surface	PCB, Total	1.04E+00	6.64E-08	3.35E-06	7.27E-08		3.49E-06	11%
9	561	1	Surface	Thallium	3.33E-01					0.00E+00	0%
9	561	1	Surface	Total PAH	3.94E-01	9.16E-08	4.29E-06	1.86E-09		4.38E-06	14%
9	561	1	Surface	Uranium	2.65E+02					0.00E+00	0%
9	561	1	Surface	Uranium-234	7.84E+00	4.33E-08		2.02E-09	1.89E-09	4.73E-08	0%
9	561	1	Surface	Uranium-235	1.37E+00	7.79E-09		3.12E-10	7.11E-07	7.19E-07	2%
9	561	1	Surface	Uranium-238	1.07E+02	7.83E-07		2.25E-08	1.16E-05	1.24E-05	39%
9	561	1	Surface	Vanadium	3.76E+01					0.00E+00	0%
9	**561**	**1**	**Surface**	**Totals**		**1.78E-06**	**1.62E-05**	**6.30E-07**	**1.32E-05**	**3.18E-05**	
9	**561**	**1**	**Surface**	**Percent**		**6%**	**51%**	**2%**	**42%**		
9	561	2	Surface	Antimony	5.33E+00					0.00E+00	0%
9	561	2	Surface	Arsenic	1.30E+01	6.22E-07	6.71E-06	4.04E-09		7.34E-06	5%
9	561	2	Surface	Beryllium	6.34E-01			1.09E-10		1.09E-10	0%
9	561	2	Surface	Cadmium	4.13E-01			5.35E-11		5.35E-11	0%
9	561	2	Surface	Cesium-137	4.09E-01	6.20E-10		1.10E-13	9.96E-07	9.97E-07	1%
9	561	2	Surface	Chromium	2.88E+02			1.74E-06		1.74E-06	1%
9	561	2	Surface	Cobalt	1.14E+01			7.38E-09		7.38E-09	0%
9	561	2	Surface	Cobalt-60	2.76E-02	3.89E-11		2.23E-14	3.28E-07	3.28E-07	0%
9	561	2	Surface	Manganese	1.12E+03					0.00E+00	0%
9	561	2	Surface	Neptunium-237	4.71E-02	2.67E-10		1.88E-11	3.60E-08	3.62E-08	0%
9	561	2	Surface	PCB, Total	1.64E+01	1.05E-06	5.27E-05	1.15E-06		5.49E-05	38%
9	561	2	Surface	Thallium	4.09E-01					0.00E+00	0%
9	561	2	Surface	Total PAH	2.43E+00	5.65E-07	2.64E-05	1.15E-08		2.70E-05	19%
9	561	2	Surface	Uranium	1.38E+03					0.00E+00	0%
9	561	2	Surface	Uranium-234	4.06E+01	2.25E-07		1.05E-08	9.82E-09	2.45E-07	0%
9	561	2	Surface	Uranium-235	7.09E+00	4.05E-08		1.62E-09	3.69E-06	3.74E-06	3%
9	561	2	Surface	Uranium-238	4.00E+02	2.94E-06		8.45E-08	4.38E-05	4.68E-05	33%
9	561	2	Surface	Vanadium	3.46E+01					0.00E+00	0%
9	**561**	**2**	**Surface**	**Totals**		**5.44E-06**	**8.59E-05**	**3.01E-06**	**4.88E-05**	**1.43E-04**	
9	**561**	**2**	**Surface**	**Percent**		**4%**	**60%**	**2%**	**34%**		
9	562	1	Surface	Uranium	8.73E+01					0.00E+00	0%
9	562	1	Surface	Uranium-238	2.73E+00	2.01E-08		5.76E-10	2.98E-07	3.19E-07	100%
9	**562**	**1**	**Surface**	**Totals**		**2.01E-08**		**5.76E-10**	**2.98E-07**	**3.19E-07**	
9	**562**	**1**	**Surface**	**Percent**		**6%**		**0%**	**94%**		
9	562	2	Surface	PCB, Total	1.58E+00	1.01E-07	5.07E-06	1.10E-07		5.28E-06	7%
9	562	2	Surface	Uranium-234	5.34E+01	2.95E-07		1.37E-08	1.29E-08	3.22E-07	0%
9	562	2	Surface	Uranium-235	8.96E+00	5.11E-08		2.04E-09	4.67E-06	4.72E-06	6%
9	562	2	Surface	Uranium-238	5.81E+02	4.27E-06		1.23E-07	6.35E-05	6.79E-05	87%
9	**562**	**2**	**Surface**	**Totals**		**4.72E-06**	**5.07E-06**	**2.49E-07**	**6.82E-05**	**7.82E-05**	
9	**562**	**2**	**Surface**	**Percent**		**6%**	**6%**	**0%**	**87%**		
9	562	3	Surface	Chromium	3.82E+01			2.31E-07		2.31E-07	5%
9	562	3	Surface	PCB, Total	2.40E-01	1.53E-08	7.71E-07	1.68E-08		8.03E-07	17%
9	562	3	Surface	Total PAH	2.20E-01	5.12E-08	2.39E-06	1.04E-09		2.45E-06	51%
9	562	3	Surface	Uranium	5.89E+01					0.00E+00	0%
9	562	3	Surface	Uranium-235	1.63E-01	9.30E-10		3.72E-11	8.49E-08	8.58E-08	2%
9	562	3	Surface	Uranium-238	1.09E+01	8.01E-08		2.30E-09	1.19E-06	1.27E-06	26%
9	**562**	**3**	**Surface**	**Totals**		**1.47E-07**	**3.17E-06**	**2.51E-07**	**1.28E-06**	**4.84E-06**	

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**562**	**3**	**Surface**	**Percent**		**3%**	**65%**	**5%**	**26%**		
9	562	4	Surface	Chromium	4.67E+01			2.82E-07		2.82E-07	52%
9	562	4	Surface	Uranium	2.10E+01					0.00E+00	0%
9	562	4	Surface	Uranium-238	2.24E+00	1.65E-08		4.73E-10	2.45E-07	2.62E-07	48%
9	**562**	**4**	**Surface**	**Totals**		**1.65E-08**		**2.82E-07**	**2.45E-07**	**5.44E-07**	
9	**562**	**4**	**Surface**	**Percent**		**3%**		**52%**	**45%**		
9	562	5	Surface	Chromium	1.53E+02			9.25E-07		9.25E-07	7%
9	562	5	Surface	PCB, Total	9.50E-01	6.05E-08	3.05E-06	6.63E-08		3.18E-06	25%
9	562	5	Surface	Total PAH	7.05E-02	1.64E-08	7.67E-07	3.33E-10		7.84E-07	6%
9	562	5	Surface	Uranium	2.08E+02					0.00E+00	0%
9	562	5	Surface	Uranium-234	8.57E+00	4.74E-08		2.21E-09	2.07E-09	5.17E-08	0%
9	562	5	Surface	Uranium-235	9.50E-01	5.42E-09		2.17E-10	4.95E-07	5.00E-07	4%
9	562	5	Surface	Uranium-238	6.24E+01	4.59E-07		1.32E-08	6.82E-06	7.29E-06	57%
9	**562**	**5**	**Surface**	**Totals**		**5.88E-07**	**3.82E-06**	**1.01E-06**	**7.32E-06**	**1.27E-05**	
9	**562**	**5**	**Surface**	**Percent**		**5%**	**30%**	**8%**	**57%**		
9	562	6	Surface	Uranium-234	4.01E+01	2.22E-07		1.03E-08	9.69E-09	2.42E-07	1%
9	562	6	Surface	Uranium-235	6.81E+00	3.89E-08		1.55E-09	3.55E-06	3.59E-06	8%
9	562	6	Surface	Uranium-238	3.62E+02	2.66E-06		7.64E-08	3.95E-05	4.23E-05	92%
9	**562**	**6**	**Surface**	**Totals**		**2.92E-06**		**8.82E-08**	**4.31E-05**	**4.61E-05**	
9	**562**	**6**	**Surface**	**Percent**		**6%**		**0%**	**93%**		
9	563	1	Surface	Cadmium	8.96E-01			1.16E-10		1.16E-10	0%
9	563	1	Surface	Chromium	2.85E+02			1.72E-06		1.72E-06	38%
9	563	1	Surface	PCB, Total	7.40E-01	4.71E-08	2.38E-06	5.17E-08		2.48E-06	55%
9	563	1	Surface	Uranium	1.51E+01					0.00E+00	0%
9	563	1	Surface	Uranium-238	2.76E+00	2.03E-08		5.83E-10	3.02E-07	3.23E-07	7%
9	**563**	**1**	**Surface**	**Totals**		**6.74E-08**	**2.38E-06**	**1.77E-06**	**3.02E-07**	**4.52E-06**	
9	**563**	**1**	**Surface**	**Percent**		**1%**	**53%**	**39%**	**7%**		
9	563	2	Surface	Cesium-137	6.47E-01	9.81E-10		1.74E-13	1.58E-06	1.58E-06	90%
9	563	2	Surface	Uranium-238	1.49E+00	1.10E-08		3.15E-10	1.63E-07	1.74E-07	10%
9	**563**	**2**	**Surface**	**Totals**		**1.19E-08**		**3.15E-10**	**1.74E-06**	**1.75E-06**	
9	**563**	**2**	**Surface**	**Percent**		**1%**		**0%**	**99%**		
9	564	1	Surface	Arsenic	4.30E+01	2.05E-06	2.22E-05	1.33E-08		2.43E-05	71%
9	564	1	Surface	Beryllium	2.12E+00			3.66E-10		3.66E-10	0%
9	564	1	Surface	Cadmium	1.96E+00			2.54E-10		2.54E-10	0%
9	564	1	Surface	Cesium-137	6.20E-01	9.40E-10		1.67E-13	1.51E-06	1.51E-06	4%
9	564	1	Surface	Chromium	7.49E+01			4.53E-07		4.53E-07	1%
9	564	1	Surface	Iron	3.66E+04					0.00E+00	0%
9	564	1	Surface	Mercury	2.30E-01					0.00E+00	0%
9	564	1	Surface	Nickel	2.24E+01			4.19E-10		4.19E-10	0%
9	564	1	Surface	PCB, Total	1.93E+00	1.23E-07	6.20E-06	1.35E-07		6.46E-06	19%
9	564	1	Surface	Thallium	2.36E+00					0.00E+00	0%
9	564	1	Surface	Thorium-230	5.01E+00	3.54E-08		3.22E-09	3.93E-09	4.26E-08	0%
9	564	1	Surface	Uranium	5.83E+01					0.00E+00	0%
9	564	1	Surface	Uranium-234	6.93E+00	3.83E-08		1.78E-09	1.67E-09	4.18E-08	0%
9	564	1	Surface	Uranium-235	3.87E-01	2.21E-09		8.83E-11	2.02E-07	2.04E-07	1%
9	564	1	Surface	Uranium-238	8.33E+00	6.12E-08		1.76E-09	9.11E-07	9.74E-07	3%
9	564	1	Surface	Vanadium	8.06E+01					0.00E+00	0%
9	**564**	**1**	**Surface**	**Totals**		**2.32E-06**	**2.84E-05**	**6.09E-07**	**2.63E-06**	**3.39E-05**	
9	**564**	**1**	**Surface**	**Percent**		**7%**	**84%**	**2%**	**8%**		
9	567	3	Surface	Chromium	3.79E+01			2.29E-07		2.29E-07	100%
9	**567**	**3**	**Surface**	**Totals**				**2.29E-07**		**2.29E-07**	
9	**567**	**3**	**Surface**	**Percent**				**100%**			
9	567	4	Surface	Aluminum	1.25E+04					0.00E+00	0%
9	567	4	Surface	Chromium	1.63E+01			9.85E-08		9.85E-08	45%
9	567	4	Surface	Uranium-238	1.05E+00	7.71E-09		2.21E-10	1.15E-07	1.23E-07	55%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
9	**567**	**4**	**Surface**	**Totals**		**7.71E-09**		**9.87E-08**	**1.15E-07**	**2.21E-07**	
9	**567**	**4**	**Surface**	**Percent**		**3%**		**45%**	**52%**		
10	14	1	Surface	Americium-241	1.27E+00	9.62E-09		8.04E-10	3.35E-08	4.40E-08	0%
10	14	1	Surface	Arsenic	1.10E+01	5.25E-07	5.67E-06	3.41E-09		6.19E-06	70%
10	14	1	Surface	Chromium	6.36E+01			3.84E-07		3.84E-07	4%
10	14	1	Surface	Iron	1.89E+04					0.00E+00	0%
10	14	1	Surface	Neptunium-237	2.14E-01	1.21E-09		8.55E-11	1.63E-07	1.65E-07	2%
10	14	1	Surface	Nickel	1.40E+02			2.61E-09		2.61E-09	0%
10	14	1	Surface	PCB, Total	5.00E-01	3.19E-08	1.61E-06	3.49E-08		1.67E-06	19%
10	14	1	Surface	Silver	1.67E+01					0.00E+00	0%
10	14	1	Surface	Technetium-99	4.06E+02	1.09E-07		1.29E-10	3.17E-08	1.41E-07	2%
10	14	1	Surface	Uranium	7.21E+01					0.00E+00	0%
10	14	1	Surface	Uranium-238	1.69E+00	1.24E-08		3.57E-10	1.85E-07	1.98E-07	2%
10	**14**	**1**	**Surface**	**Totals**		**6.89E-07**	**7.27E-06**	**4.26E-07**	**4.13E-07**	**8.80E-06**	
10	**14**	**1**	**Surface**	**Percent**		**8%**	**83%**	**5%**	**5%**		
10	14	2	Surface	Antimony	3.70E+00					0.00E+00	0%
10	14	2	Surface	Arsenic	1.45E+01	6.94E-07	7.50E-06	4.51E-09		8.20E-06	37%
10	14	2	Surface	Beryllium	7.10E-01			1.23E-10		1.23E-10	0%
10	14	2	Surface	Chromium	6.65E+01			4.02E-07		4.02E-07	2%
10	14	2	Surface	Copper	1.76E+02					0.00E+00	0%
10	14	2	Surface	Iron	3.72E+04					0.00E+00	0%
10	14	2	Surface	Manganese	1.44E+03					0.00E+00	0%
10	14	2	Surface	Mercury	2.67E-01					0.00E+00	0%
10	14	2	Surface	Neptunium-237	7.70E-01	4.37E-09		3.08E-10	5.88E-07	5.92E-07	3%
10	14	2	Surface	Nickel	6.78E+02			1.27E-08		1.27E-08	0%
10	14	2	Surface	PCB, Total	3.90E-01	2.48E-08	1.25E-06	2.72E-08		1.30E-06	6%
10	14	2	Surface	Thorium-230	5.98E+00	4.23E-08		3.85E-09	4.70E-09	5.08E-08	0%
10	14	2	Surface	Total PAH	3.38E-01	7.86E-08	3.68E-06	1.60E-09		3.76E-06	17%
10	14	2	Surface	Uranium	2.93E+02					0.00E+00	0%
10	14	2	Surface	Uranium-234	3.24E+01	1.79E-07		8.34E-09	7.83E-09	1.95E-07	1%
10	14	2	Surface	Uranium-235	2.00E+00	1.14E-08		4.56E-10	1.04E-06	1.05E-06	5%
10	14	2	Surface	Uranium-238	5.61E+01	4.12E-07		1.18E-08	6.13E-06	6.56E-06	30%
10	**14**	**2**	**Surface**	**Totals**		**1.45E-06**	**1.24E-05**	**4.73E-07**	**7.77E-06**	**2.21E-05**	
10	**14**	**2**	**Surface**	**Percent**		**7%**	**56%**	**2%**	**35%**		
10	14	3	Surface	Arsenic	1.30E+01	6.20E-07	6.69E-06	4.03E-09		7.32E-06	20%
10	14	3	Surface	Chromium	7.01E+01			4.24E-07		4.24E-07	1%
10	14	3	Surface	Copper	1.29E+02					0.00E+00	0%
10	14	3	Surface	Iron	3.48E+04					0.00E+00	0%
10	14	3	Surface	Manganese	1.06E+03					0.00E+00	0%
10	14	3	Surface	Mercury	7.48E+00					0.00E+00	0%
10	14	3	Surface	Molybdenum	2.21E+01					0.00E+00	0%
10	14	3	Surface	Nickel	5.76E+02			1.08E-08		1.08E-08	0%
10	14	3	Surface	PCB, Total	8.65E+00	5.51E-07	2.78E-05	6.04E-07		2.89E-05	78%
10	14	3	Surface	Uranium	2.18E+02					0.00E+00	0%
10	14	3	Surface	Uranium-238	1.50E+00	1.10E-08		3.17E-10	1.64E-07	1.75E-07	0%
10	**14**	**3**	**Surface**	**Totals**		**1.18E-06**	**3.45E-05**	**1.04E-06**	**1.64E-07**	**3.68E-05**	
10	**14**	**3**	**Surface**	**Percent**		**3%**	**94%**	**3%**	**0%**		
10	14	4	Surface	Antimony	4.30E+00					0.00E+00	0%
10	14	4	Surface	Arsenic	1.33E+01	6.35E-07	6.85E-06	4.12E-09		7.49E-06	13%
10	14	4	Surface	Chromium	7.20E+01			4.35E-07		4.35E-07	1%
10	14	4	Surface	Copper	3.54E+02					0.00E+00	0%
10	14	4	Surface	Iron	3.88E+04					0.00E+00	0%
10	14	4	Surface	Mercury	4.87E-01					0.00E+00	0%
10	14	4	Surface	Neptunium-237	2.68E+00	1.52E-08		1.07E-09	2.05E-06	2.06E-06	3%
10	14	4	Surface	Nickel	7.31E+02			1.37E-08		1.37E-08	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	4	Surface	PCB, Total	6.61E+00	4.21E-07	2.12E-05	4.61E-07		2.21E-05	37%
10	14	4	Surface	Silver	1.17E+01					0.00E+00	0%
10	14	4	Surface	Thorium-230	8.33E+00	5.89E-08		5.36E-09	6.54E-09	7.08E-08	0%
10	14	4	Surface	Total PAH	2.51E-01	5.83E-08	2.73E-06	1.19E-09		2.79E-06	5%
10	14	4	Surface	Uranium	3.72E+02					0.00E+00	0%
10	14	4	Surface	Uranium-234	1.13E+02	6.25E-07		2.91E-08	2.73E-08	6.81E-07	1%
10	14	4	Surface	Uranium-235	8.00E+00	4.56E-08		1.82E-09	4.17E-06	4.21E-06	7%
10	14	4	Surface	Uranium-238	1.69E+02	1.24E-06		3.57E-08	1.85E-05	1.98E-05	33%
10	**14**	**4**	**Surface**	**Totals**		**3.10E-06**	**3.08E-05**	**9.88E-07**	**2.47E-05**	**5.96E-05**	
10	**14**	**4**	**Surface**	**Percent**		**5%**	**52%**	**2%**	**41%**		
10	14	5	Surface	Antimony	2.30E+00					0.00E+00	0%
10	14	5	Surface	Arsenic	1.31E+01	6.25E-07	6.75E-06	4.06E-09		7.38E-06	27%
10	14	5	Surface	Cadmium	3.90E+00			5.05E-10		5.05E-10	0%
10	14	5	Surface	Chromium	4.70E+01			2.84E-07		2.84E-07	1%
10	14	5	Surface	Cobalt	1.40E+01			9.06E-09		9.06E-09	0%
10	14	5	Surface	Copper	1.34E+02					0.00E+00	0%
10	14	5	Surface	Iron	3.92E+04					0.00E+00	0%
10	14	5	Surface	Manganese	8.28E+02					0.00E+00	0%
10	14	5	Surface	Mercury	1.09E+01					0.00E+00	0%
10	14	5	Surface	Neptunium-237	1.74E+00	9.87E-09		6.95E-10	1.33E-06	1.34E-06	5%
10	14	5	Surface	Nickel	4.61E+02			8.63E-09		8.63E-09	0%
10	14	5	Surface	PCB, Total	1.00E+00	6.37E-08	3.21E-06	6.98E-08		3.34E-06	12%
10	14	5	Surface	Silver	1.29E+01					0.00E+00	0%
10	14	5	Surface	Technetium-99	1.01E+02	2.71E-08		3.22E-11	7.88E-09	3.50E-08	0%
10	14	5	Surface	Thallium	4.10E-01					0.00E+00	0%
10	14	5	Surface	Thorium-230	1.39E+01	9.83E-08		8.95E-09	1.09E-08	1.18E-07	0%
10	14	5	Surface	Total PAH	1.21E-01	2.81E-08	1.32E-06	5.72E-10		1.35E-06	5%
10	14	5	Surface	Uranium	2.62E+02					0.00E+00	0%
10	14	5	Surface	Uranium-234	5.22E+01	2.89E-07		1.34E-08	1.26E-08	3.15E-07	1%
10	14	5	Surface	Uranium-235	3.33E+00	1.90E-08		7.59E-10	1.73E-06	1.75E-06	7%
10	14	5	Surface	Uranium-238	9.42E+01	6.92E-07		1.99E-08	1.03E-05	1.10E-05	41%
10	**14**	**5**	**Surface**	**Totals**		**1.85E-06**	**1.13E-05**	**4.20E-07**	**1.34E-05**	**2.69E-05**	
10	**14**	**5**	**Surface**	**Percent**		**7%**	**42%**	**2%**	**50%**		
10	14	6	Surface	Antimony	2.70E+00					0.00E+00	0%
10	14	6	Surface	Cadmium	8.40E-01			1.09E-10		1.09E-10	0%
10	14	6	Surface	Chromium	4.46E+02			2.69E-06		2.69E-06	9%
10	14	6	Surface	Copper	1.22E+02					0.00E+00	0%
10	14	6	Surface	Mercury	3.47E-01					0.00E+00	0%
10	14	6	Surface	Neptunium-237	2.65E+00	1.50E-08		1.06E-09	2.02E-06	2.04E-06	7%
10	14	6	Surface	Nickel	9.63E+02			1.80E-08		1.80E-08	0%
10	14	6	Surface	PCB, Total	5.00E+00	3.19E-07	1.61E-05	3.49E-07		1.67E-05	58%
10	14	6	Surface	Silver	1.19E+01					0.00E+00	0%
10	14	6	Surface	Uranium	5.79E+02					0.00E+00	0%
10	14	6	Surface	Uranium-234	3.41E+01	1.89E-07		8.78E-09	8.24E-09	2.06E-07	1%
10	14	6	Surface	Uranium-235	2.27E+00	1.30E-08		5.18E-10	1.18E-06	1.20E-06	4%
10	14	6	Surface	Uranium-238	5.08E+01	3.73E-07		1.07E-08	5.55E-06	5.94E-06	21%
10	**14**	**6**	**Surface**	**Totals**		**9.09E-07**	**1.61E-05**	**3.08E-06**	**8.77E-06**	**2.88E-05**	
10	**14**	**6**	**Surface**	**Percent**		**3%**	**56%**	**11%**	**30%**		
10	14	7	Surface	Antimony	7.50E-01					0.00E+00	0%
10	14	7	Surface	Arsenic	1.13E+01	5.40E-07	5.83E-06	3.51E-09		6.38E-06	17%
10	14	7	Surface	Cadmium	2.70E+00			3.50E-10		3.50E-10	0%
10	14	7	Surface	Chromium	6.46E+01			3.90E-07		3.90E-07	1%
10	14	7	Surface	Mercury	7.82E+00					0.00E+00	0%
10	14	7	Surface	Neptunium-237	1.49E+00	8.45E-09		5.96E-10	1.14E-06	1.15E-06	3%
10	14	7	Surface	Nickel	1.22E+03			2.29E-08		2.29E-08	0%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	14	7	Surface	PCB, Total	7.60E+00	4.84E-07	2.44E-05	5.31E-07		2.54E-05	68%
10	14	7	Surface	Total PAH	6.31E-02	1.47E-08	6.87E-07	2.99E-10		7.02E-07	2%
10	14	7	Surface	Uranium	3.33E+02					0.00E+00	0%
10	14	7	Surface	Uranium-234	1.28E+01	7.08E-08		3.29E-09	3.09E-09	7.72E-08	0%
10	14	7	Surface	Uranium-235	9.60E-01	5.48E-09		2.19E-10	5.00E-07	5.06E-07	1%
10	14	7	Surface	Uranium-238	2.13E+01	1.57E-07		4.50E-09	2.33E-06	2.49E-06	7%
10	**14**	**7**	**Surface**	**Totals**		**1.28E-06**	**3.09E-05**	**9.57E-07**	**3.97E-06**	**3.71E-05**	
10	**14**	**7**	**Surface**	**Percent**		**3%**	**83%**	**3%**	**11%**		
10	14	8	Surface	Antimony	6.10E-01					0.00E+00	0%
10	14	8	Surface	Arsenic	1.14E+01	5.44E-07	5.87E-06	3.53E-09		6.42E-06	25%
10	14	8	Surface	Chromium	4.60E+01			2.78E-07		2.78E-07	1%
10	14	8	Surface	Mercury	7.90E+00					0.00E+00	0%
10	14	8	Surface	Neptunium-237	8.80E-01	4.99E-09		3.52E-10	6.72E-07	6.77E-07	3%
10	14	8	Surface	Nickel	6.73E+02			1.26E-08		1.26E-08	0%
10	14	8	Surface	PCB, Total	5.00E+00	3.19E-07	1.61E-05	3.49E-07		1.67E-05	65%
10	14	8	Surface	Silver	9.63E+00					0.00E+00	0%
10	14	8	Surface	Total PAH	6.28E-02	1.46E-08	6.83E-07	2.97E-10		6.98E-07	3%
10	14	8	Surface	Uranium	3.35E+02					0.00E+00	0%
10	14	8	Surface	Uranium-235	2.38E-01	1.36E-09		5.43E-11	1.24E-07	1.25E-07	0%
10	14	8	Surface	Uranium-238	5.92E+00	4.35E-08		1.25E-09	6.47E-07	6.92E-07	3%
10	**14**	**8**	**Surface**	**Totals**		**9.27E-07**	**2.26E-05**	**6.45E-07**	**1.44E-06**	**2.56E-05**	
10	**14**	**8**	**Surface**	**Percent**		**4%**	**88%**	**3%**	**6%**		
10	14	9	Surface	Antimony	2.00E+00					0.00E+00	0%
10	14	9	Surface	Arsenic	1.40E+01	6.71E-07	7.25E-06	4.36E-09		7.92E-06	4%
10	14	9	Surface	Cadmium	9.40E-01			1.22E-10		1.22E-10	0%
10	14	9	Surface	Cesium-137	4.53E-01	6.87E-10		1.22E-13	1.10E-06	1.10E-06	1%
10	14	9	Surface	Chromium	4.64E+01			2.81E-07		2.81E-07	0%
10	14	9	Surface	Mercury	1.13E+00					0.00E+00	0%
10	14	9	Surface	Neptunium-237	1.09E+01	6.20E-08		4.37E-09	8.34E-06	8.41E-06	4%
10	14	9	Surface	Nickel	9.43E+02			1.76E-08		1.76E-08	0%
10	14	9	Surface	PCB, Total	6.84E+00	4.36E-07	2.20E-05	4.78E-07		2.29E-05	10%
10	14	9	Surface	Technetium-99	1.96E+02	5.25E-08		6.24E-11	1.53E-08	6.79E-08	0%
10	14	9	Surface	Total PAH	4.87E-01	1.13E-07	5.31E-06	2.31E-09		5.42E-06	2%
10	14	9	Surface	Uranium	1.46E+03					0.00E+00	0%
10	14	9	Surface	Uranium-234	8.32E+02	4.60E-06		2.14E-07	2.01E-07	5.02E-06	2%
10	14	9	Surface	Uranium-235	5.46E+01	3.11E-07		1.24E-08	2.84E-05	2.87E-05	13%
10	14	9	Surface	Uranium-238	1.20E+03	8.82E-06		2.53E-07	1.31E-04	1.40E-04	64%
10	**14**	**9**	**Surface**	**Totals**		**1.51E-05**	**3.45E-05**	**1.27E-06**	**1.69E-04**	**2.20E-04**	
10	**14**	**9**	**Surface**	**Percent**		**7%**	**16%**	**1%**	**77%**		
10	14	10	Surface	Antimony	9.40E-01					0.00E+00	0%
10	14	10	Surface	Arsenic	1.12E+01	5.37E-07	5.80E-06	3.49E-09		6.34E-06	13%
10	14	10	Surface	Chromium	4.19E+01			2.53E-07		2.53E-07	1%
10	14	10	Surface	Copper	1.41E+02					0.00E+00	0%
10	14	10	Surface	Iron	2.75E+04					0.00E+00	0%
10	14	10	Surface	Mercury	2.51E+01					0.00E+00	0%
10	14	10	Surface	Neptunium-237	2.64E+00	1.50E-08		1.06E-09	2.02E-06	2.03E-06	4%
10	14	10	Surface	Nickel	6.00E+02			1.12E-08		1.12E-08	0%
10	14	10	Surface	PCB, Total	9.38E+00	5.98E-07	3.01E-05	6.55E-07		3.14E-05	64%
10	14	10	Surface	Total PAH	2.72E-01	6.31E-08	2.96E-06	1.28E-09		3.02E-06	6%
10	14	10	Surface	Uranium	2.88E+02					0.00E+00	0%
10	14	10	Surface	Uranium-234	2.42E+01	1.34E-07		6.23E-09	5.85E-09	1.46E-07	0%
10	14	10	Surface	Uranium-235	1.76E+00	1.00E-08		4.01E-10	9.16E-07	9.27E-07	2%
10	14	10	Surface	Uranium-238	4.09E+01	3.01E-07		8.64E-09	4.47E-06	4.78E-06	10%
10	**14**	**10**	**Surface**	**Totals**		**1.66E-06**	**3.89E-05**	**9.40E-07**	**7.41E-06**	**4.89E-05**	
10	**14**	**10**	**Surface**	**Percent**		**3%**	**80%**	**2%**	**15%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	518	1	Surface	Carbazole	1.17E+01	7.47E-09	2.69E-07			2.76E-07	0%
10	518	1	Surface	Cobalt	6.80E+00			4.41E-09		4.41E-09	0%
10	518	1	Surface	Nickel	1.29E+01			2.41E-10		2.41E-10	0%
10	518	1	Surface	PCB, Total	6.30E-01	4.01E-08	2.02E-06	4.40E-08		2.11E-06	0%
10	518	1	Surface	Pyrene	3.94E+01					0.00E+00	0%
10	518	1	Surface	Total PAH	3.90E+01	9.06E-06	4.24E-04	1.84E-07		4.33E-04	99%
10	518	1	Surface	Uranium	2.17E+02					0.00E+00	0%
10	518	1	Surface	Uranium-235	6.74E-02	3.85E-10		1.54E-11	3.51E-08	3.55E-08	0%
10	518	1	Surface	Uranium-238	1.51E+00	1.11E-08		3.20E-10	1.66E-07	1.77E-07	0%
10	**518**	**1**	**Surface**	**Totals**		**9.12E-06**	**4.26E-04**	**2.33E-07**	**2.01E-07**	**4.36E-04**	
10	**518**	**1**	**Surface**	**Percent**		**2%**	**98%**	**0%**	**0%**		
10	520	1	Surface	Cesium-137	9.62E-01	1.46E-09		2.58E-13	2.34E-06	2.34E-06	58%
10	520	1	Surface	Chromium	3.17E+01			1.92E-07		1.92E-07	5%
10	520	1	Surface	Iron	1.56E+04					0.00E+00	0%
10	520	1	Surface	Mercury	1.07E+01					0.00E+00	0%
10	520	1	Surface	Neptunium-237	6.56E-01	3.72E-09		2.62E-10	5.01E-07	5.05E-07	13%
10	520	1	Surface	Nickel	2.60E+02			4.87E-09		4.87E-09	0%
10	520	1	Surface	Silver	1.30E+01					0.00E+00	0%
10	520	1	Surface	Thorium-230	1.13E+01	8.02E-08		7.30E-09	8.91E-09	9.64E-08	2%
10	520	1	Surface	Total PAH	3.18E-02	7.40E-09	3.46E-07	1.51E-10		3.54E-07	9%
10	520	1	Surface	Uranium	2.29E+01					0.00E+00	0%
10	520	1	Surface	Uranium-235	1.26E-01	7.19E-10		2.87E-11	6.56E-08	6.64E-08	2%
10	520	1	Surface	Uranium-238	3.93E+00	2.89E-08		8.30E-10	4.29E-07	4.59E-07	11%
10	**520**	**1**	**Surface**	**Totals**		**1.22E-07**	**3.46E-07**	**2.05E-07**	**3.35E-06**	**4.02E-06**	
10	**520**	**1**	**Surface**	**Percent**		**3%**	**9%**	**5%**	**83%**		
10	520	2	Surface	Beryllium	5.79E-01			1.00E-10		1.00E-10	0%
10	520	2	Surface	Chromium	6.67E+01			4.03E-07		4.03E-07	10%
10	520	2	Surface	Manganese	5.89E+02					0.00E+00	0%
10	520	2	Surface	Mercury	1.19E+01					0.00E+00	0%
10	520	2	Surface	Neptunium-237	7.48E-02	4.24E-10		2.99E-11	5.71E-08	5.75E-08	1%
10	520	2	Surface	Nickel	3.11E+02			5.81E-09		5.81E-09	0%
10	520	2	Surface	Total PAH	3.17E-01	7.37E-08	3.45E-06	1.50E-09		3.53E-06	84%
10	520	2	Surface	Uranium	3.96E+01					0.00E+00	0%
10	520	2	Surface	Uranium-238	1.78E+00	1.31E-08		3.75E-10	1.94E-07	2.08E-07	5%
10	**520**	**2**	**Surface**	**Totals**		**8.72E-08**	**3.45E-06**	**4.11E-07**	**2.51E-07**	**4.20E-06**	
10	**520**	**2**	**Surface**	**Percent**		**2%**	**82%**	**10%**	**6%**		
10	520	3	Surface	Chromium	3.97E+01			2.40E-07		2.40E-07	14%
10	520	3	Surface	Copper	1.19E+02					0.00E+00	0%
10	520	3	Surface	Nickel	2.65E+02			4.95E-09		4.95E-09	0%
10	520	3	Surface	Silver	1.27E+01					0.00E+00	0%
10	520	3	Surface	Total PAH	1.18E-01	2.75E-08	1.29E-06	5.58E-10		1.31E-06	75%
10	520	3	Surface	Uranium	1.92E+01					0.00E+00	0%
10	520	3	Surface	Uranium-238	1.57E+00	1.15E-08		3.31E-10	1.72E-07	1.83E-07	11%
10	**520**	**3**	**Surface**	**Totals**		**3.90E-08**	**1.29E-06**	**2.46E-07**	**1.72E-07**	**1.74E-06**	
10	**520**	**3**	**Surface**	**Percent**		**2%**	**74%**	**14%**	**10%**		
10	520	4	Surface	Chromium	3.82E+01			2.31E-07		2.31E-07	3%
10	520	4	Surface	Copper	1.11E+02					0.00E+00	0%
10	520	4	Surface	Mercury	9.69E+00					0.00E+00	0%
10	520	4	Surface	Neptunium-237	7.40E-01	4.20E-09		2.96E-10	5.65E-07	5.69E-07	7%
10	520	4	Surface	Nickel	2.82E+02			5.27E-09		5.27E-09	0%
10	520	4	Surface	Silver	1.04E+01					0.00E+00	0%
10	520	4	Surface	Total PAH	5.52E-01	1.28E-07	6.01E-06	2.61E-09		6.14E-06	79%
10	520	4	Surface	Uranium	2.40E+01					0.00E+00	0%
10	520	4	Surface	Uranium-235	2.42E-01	1.38E-09		5.52E-11	1.26E-07	1.27E-07	2%
10	520	4	Surface	Uranium-238	6.26E+00	4.60E-08		1.32E-09	6.84E-07	7.32E-07	9%

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
10	**520**	**4**	**Surface**	**Totals**		**1.80E-07**	**6.01E-06**	**2.41E-07**	**1.38E-06**	**7.81E-06**	
10	**520**	**4**	**Surface**	**Percent**		**2%**	**77%**	**3%**	**18%**		
10	520	5	Surface	Antimony	9.60E-01					0.00E+00	0%
10	520	5	Surface	Chromium	3.68E+01			2.22E-07		2.22E-07	5%
10	520	5	Surface	Neptunium-237	1.55E-01	8.79E-10		6.20E-11	1.18E-07	1.19E-07	2%
10	520	5	Surface	Nickel	1.47E+02			2.75E-09		2.75E-09	0%
10	520	5	Surface	Total PAH	3.87E-01	9.01E-08	4.21E-06	1.83E-09		4.31E-06	89%
10	520	5	Surface	Uranium-238	1.45E+00	1.07E-08		3.06E-10	1.59E-07	1.69E-07	4%
10	**520**	**5**	**Surface**	**Totals**		**1.02E-07**	**4.21E-06**	**2.27E-07**	**2.77E-07**	**4.82E-06**	
10	**520**	**5**	**Surface**	**Percent**		**2%**	**87%**	**5%**	**6%**		
11	81	1	Surface	Aluminum	9.57E+03					0.00E+00	0%
11	81	1	Surface	Arsenic	1.03E+01	4.90E-07	5.29E-06	3.18E-09		5.78E-06	1%
11	81	1	Surface	Beryllium	7.57E-01			1.31E-10		1.31E-10	0%
11	81	1	Surface	Chromium	8.62E+01			5.21E-07		5.21E-07	0%
11	81	1	Surface	Mercury	8.33E+00					0.00E+00	0%
11	81	1	Surface	Nickel	7.29E+01			1.36E-09		1.36E-09	0%
11	81	1	Surface	PCB, Total	1.60E+02	1.02E-05	5.13E-04	1.12E-05		5.34E-04	98%
11	81	1	Surface	Silver	2.70E+00					0.00E+00	0%
11	81	1	Surface	Total PAH	5.53E-01	1.29E-07	6.02E-06	2.62E-09		6.15E-06	1%
11	81	1	Surface	Uranium	6.50E+03					0.00E+00	0%
11	81	1	Surface	Uranium-238	2.29E+00	1.68E-08		4.82E-10	2.50E-07	2.67E-07	0%
11	**81**	**1**	**Surface**	**Totals**		**1.08E-05**	**5.24E-04**	**1.17E-05**	**2.50E-07**	**5.47E-04**	
11	**81**	**1**	**Surface**	**Percent**		**2%**	**96%**	**2%**	**0%**		
11	153	1	Surface	PCB, Total	5.09E-01	3.24E-08	1.63E-06	3.55E-08		1.70E-06	64%
11	153	1	Surface	Total PAH	8.69E-02	2.02E-08	9.46E-07	4.11E-10		9.67E-07	36%
11	**153**	**1**	**Surface**	**Totals**		**5.26E-08**	**2.58E-06**	**3.59E-08**		**2.67E-06**	
11	**153**	**1**	**Surface**	**Percent**		**2%**	**97%**	**1%**			
11	156	1	Surface	Chromium	4.90E+01			2.96E-07		2.96E-07	12%
11	156	1	Surface	Manganese	2.83E+03					0.00E+00	0%
11	156	1	Surface	Mercury	9.87E+00					0.00E+00	0%
11	156	1	Surface	Nickel	6.16E+01			1.15E-09		1.15E-09	0%
11	156	1	Surface	PCB, Total	3.00E-01	1.91E-08	9.63E-07	2.09E-08		1.00E-06	41%
11	156	1	Surface	Total PAH	8.26E-02	1.92E-08	8.99E-07	3.91E-10		9.19E-07	37%
11	156	1	Surface	Uranium	2.32E+01					0.00E+00	0%
11	156	1	Surface	Uranium-238	2.19E+00	1.61E-08		4.62E-10	2.39E-07	2.56E-07	10%
11	**156**	**1**	**Surface**	**Totals**		**5.44E-08**	**1.86E-06**	**3.19E-07**	**2.39E-07**	**2.48E-06**	
11	**156**	**1**	**Surface**	**Percent**		**2%**	**75%**	**13%**	**10%**		
11	160	1	Surface	Antimony	6.80E-01					0.00E+00	0%
11	160	1	Surface	Total PAH	5.29E-02	1.23E-08	5.76E-07	2.50E-10		5.88E-07	100%
11	**160**	**1**	**Surface**	**Totals**		**1.23E-08**	**5.76E-07**	**2.50E-10**		**5.88E-07**	
11	**160**	**1**	**Surface**	**Percent**		**2%**	**98%**	**0%**			
11	163	1	Surface	Chromium	4.94E+01			2.99E-07		2.99E-07	14%
11	163	1	Surface	Total PAH	1.63E-01	3.79E-08	1.77E-06	7.71E-10		1.81E-06	86%
11	**163**	**1**	**Surface**	**Totals**		**3.79E-08**	**1.77E-06**	**3.00E-07**		**2.11E-06**	
11	**163**	**1**	**Surface**	**Percent**		**2%**	**84%**	**14%**			
11	219	1	Surface	Neptunium-237	3.31E-01	1.88E-09		1.32E-10	2.53E-07	2.55E-07	15%
11	219	1	Surface	Nickel	6.71E+01			1.26E-09		1.26E-09	0%
11	219	1	Surface	Total PAH	7.50E-02	1.75E-08	8.17E-07	3.55E-10		8.35E-07	49%
11	219	1	Surface	Uranium-235	1.92E-01	1.10E-09		4.38E-11	1.00E-07	1.01E-07	6%
11	219	1	Surface	Uranium-238	4.40E+00	3.23E-08		9.29E-10	4.81E-07	5.14E-07	30%
11	**219**	**1**	**Surface**	**Totals**		**5.28E-08**	**8.17E-07**	**2.72E-09**	**8.34E-07**	**1.71E-06**	
11	**219**	**1**	**Surface**	**Percent**		**3%**	**48%**	**0%**	**49%**		
11	488	1	Surface	Cesium-137	5.20E-01	7.88E-10		1.40E-13	1.27E-06	1.27E-06	3%
11	488	1	Surface	PCB, Total	1.03E+01	6.56E-07	3.31E-05	7.19E-07		3.45E-05	88%
11	488	1	Surface	Total PAH	2.50E-01	5.81E-08	2.72E-06	1.18E-09		2.78E-06	7%

SWMU = solid waste management unit
EU = exposure unit
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EPC = exposure point concentration
ELCR = excess lifetime cancer risk

Table D.35. ELCR for the Teen Recreational User (Continued)

Ch	SWMU	EU	Depth	COPC	EPC (mg/kg or pCi/g)	Ingestion	Dermal	Inhalation	External Exposure	ELCR	Percent
11	488	1	Surface	Uranium	1.48E+01					0.00E+00	0%
11	488	1	Surface	Uranium-235	1.49E-01	8.50E-10		3.40E-11	7.76E-08	7.85E-08	0%
11	488	1	Surface	Uranium-238	4.54E+00	3.34E-08		9.59E-10	4.96E-07	5.31E-07	1%
11	**488**	**1**	**Surface**	**Totals**		**7.49E-07**	**3.58E-05**	**7.21E-07**	**1.84E-06**	**3.91E-05**	
11	**488**	**1**	**Surface**	**Percent**		**2%**	**92%**	**2%**	**5%**		

SWMU = solid waste management unit
EU = exposure unit
COPC = chemical of potential concern
EPC = exposure point concentration
ELCR = excess lifetime cancer risk