Data Table 6-7, Radioactive Liquid Releases by Site Stream - (Curies)

Nuclide	Upper Three Runs A,M,F,H	Fourmile Branch F,H,Tritium	Steel Creek + Pen Branch K,L	Lower Three Runs P,R	Totals
H-3[a]	2.01E+02	5.62E+02	2.37E+02	8.13E+01	**1.08E+03**
C-14	3.02E-04	5.83E-03			**6.13E-03**
Sr-90	3.85E-06	2.39E-02			**2.39E-02**
Tc-99		1.85E-02			**1.85E-02**
I-129		2.70E-02			**2.70E-02**
Cs-137[b]	2.57E-03	1.17E-02			**3.34E-02**
U-234	4.53E-02	5.53E-05			**4.54E-02**
U-235	2.63E-03	1.20E-06			**2.63E-03**
U-238	5.49E-02	6.05E-05			**5.50E-02**
Np-237		5.05E-07			**5.05E-07**
Pu-238	3.28E-06	6.24E-04			**6.27E-04**
Pu-239	4.86E-07	4.76E-05			**4.81E-05**
Am-241	4.22E-03	5.29E-05			**4.27E-03**
Cm-244		2.23E-05			**2.23E-05**
Alpha[c]	5.48E-04	4.63E-03			**5.18E-03**
Beta-Gamma[d]	2.64E-03	9.53E-03	2.90E-02		**4.12E-02**
Flow Volume (L)	1.74E+11	1.61E+10	3.16E+10	3.84E+10	

a) The tritium release total includes direct + migration releases which are used in the dose calclulations for SRS impacts.

b) Depending on which value is higher, the Cs-137 release total is based on concentrations measured in RM 118.8 fish or on the actual measured effluent release total from the site. Refer to chapter 6 (Dose) for more information.

c,d) For dose calculations, unspecified alpha and beta/gamma releases are assumed to be Pu-239 and Sr-90, respectively.

2013 Direct Effluent and Migration/Transport Releases Into Upper Three Runs (Curies)

	H-3	C-14	Sr-90	Tc-99	I-129	Cs-137	U-234	U-235	U-238	Np-237	Pu-238	Pu-239	Am-241	Cm-244	Alpha	Beta	Volume (Liters)	
HP-15 (44)	4.78E+00		0.00E+00			0.00E+00									0.00E+00	4.06E-04	3.78E+08	
H-004 (1782)	1.26E+01		0.00E+00			0.0E+00	1.69E-04	6.95E-06	1.77E-05		4.74E-07	0.00E+00			9.89E-05	8.97E-04	9.94E+08	
U3R-2A (47)	2.54E+01	3.02E-04	3.85E-06			2.57E-03	2.36E-08	3.59E-08	3.38E-08	0.00E+00	1.15E-07	5.42E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E+07	
TB-2 (SDN-1)	1.24E-01						4.63E-05	4.22E-06	2.11E-05		1.62E-06	4.32E-07			4.15E-04	6.16E-04	4.05E+08	
S-004 (SDN 1740)	2.29E-01		0.00E+00			0.00E+00	1.37E-06	0.00E+00	2.88E-06		1.07E-06	0.00E+00			3.37E-05	7.19E-04	5.20E+07	
Migration into U3R	1.58E+02		0.00E+00			0.00E+00	4.51E-02	2.62E-03	5.49E-02				4.22E-03				1.74E+11	
Totals	**2.01E+02**	**3.02E-04**	**3.85E-06**	**0.00E+00**	**0.00E+00**	**2.57E-03**	**4.53E-02**	**2.63E-03**	**5.49E-02**	**0.00E+00**	**3.28E-06**	**4.86E-07**	**4.22E-03**	**0.00E+00**	**5.48E-04**	**2.64E-03**	**1.74E+11**	(U3R-4 flow)

2013 Direct Effluent and Migration/Transport Releases Into Four Mile Branch (Curies)

	H-3	C-14	Sr-90	Tc-99	I-129	Cs-137	U-234	U-235	U-238	Np-237	Pu-238	Pu-239	Am-241	Cm-244	Alpha	Beta	Volume (Liters)	
FM-3 (SDN 12)	1.87E-01	4.59E-04	0.00E+00	1.92E-04	0.00E+00	0.00E+00	2.81E-05	1.20E-06	2.59E-05	2.67E-07	9.08E-07	1.11E-06	8.77E-07	8.80E-07	1.88E-04	4.82E-04	1.97E+08	
F-012 (SDN 1448)	1.09E-01		3.03E-04	5.86E-05	0.00E+00	8.64E-04	1.54E-06	0.00E+00	0.00E+00	0.00E+00	9.66E-07	0.00E+00	0.00E+00	0.00E+00	3.42E-05	1.50E-04	9.06E+07	
F-013 (SDN 1449)	4.75E-02		1.38E-05	5.54E-06	6.18E-06	0.00E+00	1.83E-06	0.00E+00	1.69E-06	0.00E+00	3.65E-07	8.12E-07	2.86E-07	6.73E-07	0.00E+00	9.74E-05	2.67E+07	
F-05 (SDN 2416)	1.10E-02	2.80E-05	6.69E-05	4.86E-06	8.71E-06	0.00E+00	6.90E-07	0.00E+00	8.35E-07	0.00E+00	1.63E-07	4.76E-08	2.56E-07	1.65E-08	1.82E-07	5.42E-05	1.44E+07	
HP-52 (21)	9.69E-01		9.05E-05			0.00E+00	1.52E-05	0.00E+00	1.30E-05		7.39E-06	0.00E+00	1.78E-06	0.00E+00	7.57E-04	2.57E-03	4.16E+08	
FM-1C (10)	8.55E+00	5.34E-03	1.10E-03			0.00E+00	6.49E-06	0.00E+00	1.87E-05	2.38E-07	4.68E-04	3.36E-05	4.42E-05	2.01E-05	3.64E-03	6.18E-03	1.78E+09	
H-017 (1417)	3.74E-01		1.31E-03	1.77E-04	5.19E-06	8.29E-03	1.48E-06	0.00E+00	4.20E-07	0.00E+00	1.46E-04	1.20E-05	5.48E-06	5.96E-07	1.10E-05	0.00E+00	1.37E+08	
F Migration	4.91E+01		2.33E-03	0.00E+00	1.99E-02	2.50E-03											9.56E+09	
H #4 & SWDF Migration	3.92E+02		1.89E-04	0.00E+00	0.00E+00	0.00E+00											3.75E+08	
H-Seepage Migration	1.11E+02		1.85E-02	1.80E-02	7.07E-03	0.00E+00											7.19E+09	
Totals	**5.62E+02**	**5.83E-03**	**2.39E-02**	**1.85E-02**	**2.70E-02**	**1.17E-02**	**5.53E-05**	**1.20E-06**	**6.05E-05**	**5.05E-07**	**6.24E-04**	**4.76E-05**	**5.29E-05**	**2.23E-05**	**4.63E-03**	**9.53E-03**	**1.61E+10**	**(FM-6 flow)**

2013 Direct Effluent and Migration/Transport Releases Into Steel Creek and Pen Branch (Curies)

	H-3	C-14	Sr-90	Tc-99	I-129	Cs-137	U-234	U-235	U-238	Np-237	Pu-238	Pu-239	Am-241	Cm-244	Alpha	Beta	Volume (Liters)
K-Canal (1443)	3.67E-01		0.00E+00			0.00E+00									0.00E+00	1.88E-03	8.36E+08
PB-3 (36) - Migration in PB	2.02E+02																1.49E+10
L-07 (1455)	4.05E+00		0.00E+00			0.00E+00									0.00E+00	2.71E-02	1.35E+10
SC-4 (30) - Transport in SC	3.51E+01																1.67E+10
Totals	**2.37E+02**		**0.00E+00**			**0.00E+00**									**0.00E+00**	**2.90E-02**	**3.16E+10**

2013 Transport Releases Into Lower Three Runs (Curies)

	H-3	C-14	Sr-90	Tc-99	I-129	Cs-137	U-234	U-235	U-238	Np-237	Pu-238	Pu-239	Am-241	Cm-244	Alpha	Beta	Volume (Liters)
L3R-2 (2) - Transport in L3R	8.13E+01					0.00E+00											3.84E+10
Totals	**8.13E+01**					**0.00E+00**											**3.84E+10**