DOE/ORO/2206

ENVIRONMENTAL MONITORING ON THE OAK RIDGE RESERVATION: 2004 RESULTS

Compiled by
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LIST OF TABLES

East Tennessee Technology Park

Oak Ridge National Laboratory

Oak Ridge National Laboratory (continued)

ORR Surveillance

Y-12 National Security Complex

Y-12 National Security Complex (continued)

Y-12 National Security Complex (continued)

Y-12 National Security Complex (continued)

Table 1.1. 2004 NPDES Permit Number TN 0002950
ETTP Storm Drain Discharge Points

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values exceeding reference
		Max	Min	Avg		
Discharge Point SD 05A						
Flow, GPD	12	18500	1200	6450		
Total Suspended	6	4.4	<2.0	<2.4		
pH, Standard Units	12	7.2	6.7	6.9	4.0 - 9.0	0
Oil & Grease	6	1.06	<5.0	<4.3		
Discharge Point SD 100						
Flow, GPD	52	4733000	742100	2257830		
Total Suspended	15	18.8	2	5.8		
pH, Standard Units	52	7.7	6.7	7.1	6.0 - 9.0	0
Oil & Grease	15	1.0	<5.0	<4.3		
Total Residual	52	0.35	0	0.015	0.14	0
Discharge Point SD 120						
Flow, GPD	1	220600	0	220600		
Total Suspended	1	4,2	14.2	14.2		
pH, Standard Units	1	6.8	6.8	6.8	4.0 - 9.0	0
Discharge Point SD 124						
Flow, GPD	15	586200	56100	333380		
Total Suspended	12	12.4	<2.0	<5.5		
pH, Standard Units	15	7.8	6.7	7.3	6.0 - 9.0	0
Discharge Point SD 130						
Flow, GPD	12	69926000	188600	3100300		
Total Suspended	12	27.6	4.2	12.0		
pH, Standard Units	12	7.4	6.7	7.0	6.0 - 9.0	0
Oil & Grease	12	9.0	<5.0	<6.3		
Discharge Point SD 140						
Flow, GPD	1	97100	97100	97100		
ph, Standard Units	1	7.4	7.4	7.4	4.0 - 9.0	0

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values exceeding reference
		Max	Min	Avg		
Discharge Point SD 142						
Flow, GPD	6	151800	32220	91210		
pH, Standard Units	6	7.7	6.8	7.4	4.0 - 9.0	0
Discharge Point SD 144						
Flow, GPD	3	329700	18200	133470		
pH, Standard Units	3	7.2	6.8	7.1	4.0 - 9.0	0
Discharge Point SD 146						
Flow, GPD	2	32890	0	22850		
pH, Standard Units	2	7.1	7.1	7.1	4.0 - 9.0	0
Total Suspended	2	3.4	<2.0	<2.7		
Discharge Point SD 148						
Flow, GPD	3	19110	3400	9510		
pH, Standard Units	3	7.7	7.0	7.3	4.0 - 9.0	0
Discharge Point SD 150						
Flow, GPD	5	554700	121300	304980		
pH, Standard Units	5	7.4	6.7	7.3	4.0 - 9.0	0
Discharge Point SD 154						
Flow, GPD	12	235700	54400	121904		
pH, Standard Units	12	7.7	6.8	7.1	4.0 - 9.0	0
Oil & Grease	6	0.899	<5.0	<4.32		
Discharge Point SD 156						
Flow, GPD	1	4339000	4339	4339000		
pH, Standard Units	1	6.7	6.7	6.7	4.0 - 9.0	
Discharge Point SD 158						
Oil & Grease	3	1.03	<5.0	<3.8		
Flow, GPD	9	65440	0	37460		
pH, Standard Units	9	7.3	6.7	6.8	4.0 - 9.0	0
Total Suspended	4	4.7	<2.0	<2.7		
Discharge Point SD 160						
Flow, GPD	1	194100	194100	194100		
pH, Standard Units	1	7.3	7.3	7.3	4.0 - 9.0	0

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values exceeding reference
		Max	Min	Avg		
		Discharge Point SD 162				
Flow, GPD	1	85256	85256	85256		
pH, Standard Units	1	7.0	7.0	7.0	4.0 - 9.0	0
		Discharge Point SD 170				
Flow, GPD	21	1666600	128400	704770		
Total Suspended	15	5.0	<2.0	<2.5		
pH, Standard Units	21	7.8	6.9	7.4	6.0 - 9.0	0
Oil & Grease	15	7.3	<5.0	<4.8		
		Discharge Point SD 180				
Flow, GPD	21	1509300	131700	664720		
Total Suspended	15	33.4	<2.0	<17.6		
pH, Standard Units	21	7.8	7.0	7.4	6.0 - 9.0	0
Oil & Grease	15	1.79	<5.0	<4.47		
		Discharge Point SD 190				
Flow, GPD	21	1941500	257500	986230		
Total Suspended	15	10.9	<2.0	<4.1		
pH, Standard Units	21	7.5	6.7	7.1	6.0 - 9.0	0
Oil & Grease	15	9.1	<5.0	<5.1		
		Discharge Point SD 192				
Flow, GPD	1	805300	80530	80350		
pH, Standard Units	1	7.0	7.0	7.0	4.0 - 9.0	0
		Discharge Point SD 194				
Flow, GPD	1	80530	80530	80530		
pH, Standard Units	1	7.3	7.3	7.3	4.0 - 9.0	0
		Discharge Point SD 195				
Oil & Grease	3	0.795	<5.0	<3.6		
Flow, GPD	9	90500	4200	34560		
pH, Standard Units	9	7.5	6.7	7.2	4.0 - 9.0	0
Total Suspended	3	26.0	2.8	16.6		

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values exceeding reference
		Max	Min	Avg		
		Discharge Point SD 197				
Flow, GPD	1	27280	27280	27280		
pH, Standard Units	1	7.0	7.0	7.2	4.0 - 9.0	0
Total Suspended	1	17.8	17.8	17.8		
		Discharge Point SD 198				
Flow, GPD	3	320300	234900	293900		
pH, Standard Units	3	7.6	7.2	7.4	4.0 - 9.0	0
		Discharge Point SD 200				
Flow, GPD	3	806000	155200	3648030		
pH, Standard Units	3	7.1	6.9	7.0	4.0-9.0	0
		Discharge Point SD 210				
Flow, GPD	8	1098000	0	630900		
pH, Standard Units	8	7.9	7.0	7.3	4.0 - 9.0	0
Total Suspended	4	52.4	4.8	19.7		
Oil & Grease	3	0.985	<5.0	<3.66		
		Discharge Point SD 220				
Flow, GPD	3	835300	5015	34120		
Total Suspended	3	4.2	<2.0	<3.3		
pH, Standard Units	3	7.9	6.7	7.4	4.0 - 9.0	0
		Discharge Point SD 230				
Flow, GPD	12	1244000	262900	627140		
pH, Standard Units	12	8.1	7.1	7.5	4.0 - 9.0	0
Oil & Grease	12	1.14	<5.0	<4.4		
		Discharge Point SD 240				
Flow, GPD	3	894200	199000	475600		
Total Suspended	3	2.4	<2.0	<2.1		
pH, Standard Units	3	7.1	6.9	7.0	4.0 - 9.0	0
		Discharge Point SD 250				
Flow, GPD	4	235800	64300	167800		
Total Suspended	2	12.4	2.4	7.4		
pH, Standard Units	4	7.3	6.6	7.0		

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values exceeding reference
		Max	Min	Avg		
		Discharge Point SD 280				
Oil & Grease	3	2.22	<5.0	<4.1		
Flow, GPD	8	70220	0	27140		
pH, Standard Units	8	8.1	7.3	7.6		
Total Suspended	3	1210.0	13.6	318.2		
		Discharge Point SD 294				
Flow, GPD	6	118200	0	47680		
pH, Standard Units	6	7.7	7.0	7.3	4.0 - 9.0	0
Total Suspended	3	3.0	<2.0	<2.3		
Oil & Grease	3	1.25	<5.0	<3.8		
		Discharge Point SD 334				
Flow, GPD	3	33800	17700	25750		
pH, Standard Units	3	7.0	6.7	6.9		
		Discharge Point SD 340				
Flow, GPD	9	558200	137300	281020		
pH, Standard Units	9	7.7	7.1	7.4	4.0 - 9.0	0
Oil & Grease	3	0.899	<5.0	<3.6		
		Discharge Point SD 350				
Oil & Grease	3	1.56	<5.0	<3.85		
Flow, GPD	9	57100	6000	20910		
pH, Standard Units	9	7.5	6.9	7.2	4.0 - 9.0	0
Total Suspended	3	32.4	7.0	21.8		
		Discharge Point SD 352				
Flow, GPD	1	360	360	360		
pH, Standard Units	1	6.9	6.9	6.9		
		Discharge Point SD 360				
Oil & Grease	3	2.28	<5.0	<4.1		
Flow, GPD	6	32800	0	16850		
pH, Standard Units	6	7.4	6.7	7.0		
Total Suspended	3	15.0	<2.0	<7.5		

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values exceeding reference
		Max	Min	Avg		
Discharge Point SD 380						
Flow, GPD	6	1116200	261100	713620		
pH, Standard Units	6	7.5	7.0	7.3	4.0 - 9.0	0
Total Suspended	4	2.4	<2.0	<2.2		
Discharge Point SD 382						
Flow, GPD	9	128300	29100	62580		
pH, Standard Units	9	7.7	7.1	7.4	4.0 - 9.0	0
Total Suspended	3	2.2	<2.0	<1.9		
Discharge Point SD 390						
Flow, GPD	8	401900	0	173440		
pH, Standard Units	8	7.2	6.5	6.9	4.0 - 9.0	0
Total Suspended	8	13.0	2.2	.9		
Oil & Grease	8	0.682	<5.0	6.9		
Discharge Point SD 410						
Flow, GPD	2	52600	34100	43350		
pH, Standard Units	2	7.3	7.3	7.3	4.0 - 9.0	0
Discharge Point SD 430						
Flow, GPD	12	1014400	203100	501750		
pH, Standard Units	12	7.7	6.9	7.4	4.0 - 9.0	0
Oil & Grease	12	1.38	<5.0	<4.4		
Discharge Point SD 440						
Flow, GPD	3	593300	46300	250470		
pH, Standard Units	3	7.3	7.1	7.2	4.0 - 9.0	0
Discharge Point SD 450						
Flow, GPD	1	53170	53170	53170		
pH, Standard Units	1	7.2	7.2	7.2	4.0 - 9.0	0
Discharge Point SD 490						
Flow, GPD	12	4387100	821500	2085410		
pH, Standard Units	12	7.6	6.8	7.2	4.0 - 9.0	0
Oil & Grease	6	1.02	<5.0	<5.2		
Total Suspended	6	16.2	<2.0	<4.3		

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values exceeding reference
		Max	Min	Avg		
		Discharge Point SD 510				
Flow, GPD	6	796900	18300	49280		
Total Suspended	4	6.8	<2.0	<4.6		
pH, Standard Units	6	7.6	6.4	6.9	4.0 - 9.0	0
		Discharge Point SD 532				
Flow, GPD	2	25000	18600	21800		
pH, Standard Units	2	7.3	7.3	7.3		
		Discharge Point SD 560				
Flow, GPD	1	46400	46400	46400		
Total Suspended	1	10.2	10.2	10.2		
pH, Standard Units	1	7.0	7.0	7.0	4.0 - 9.0	0
		Discharge Point SD 570				
Flow, GPD	3	114600	38400	79230		
pH, Standard Units	3	7.2	7.0	7.1		
Total Suspended	1	3.2	3.2	3.2		
		Discharge Point SD 600				
Flow, GPD	1	159100	159100	159100		
Total Suspended	1	156	156	156		
pH, Standard Units	1	6.9	6.9	6.9		
		Discharge Point SD 610				
Flow, GPD	2	462800	0	266050		
Total Suspended	2	47.8	7.2	27.5		
pH, Standard Units	2	6.9	6.7	6.8		
		Discharge Point SD 640				
Flow, GPD	1	78160	78160	78160		
Total Suspended	1	47.6	47.6	47.6		
pH, Standard Units	4	7.1	7.1	7.1	4.0 - 9.0	0
		Discharge Point SD 660				
Flow, GPD	3	17100	6000	13100		
pH, Standard Units	3	7.8	7.2	7.6	4.0 - 9.0	0
Total Suspended	1	13.8	13.8	13.8		

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values exceeding reference
		Max	Min	Avg		
		Discharge Point SD 680				
Flow, GPD	1	95100	95100	95100		
pH, Standard Units	1	7.3	7.3	7.3	4.0 - 9.0	0
Total Suspended	1	2.6	2.6	2.6		
		Discharge Point SD 690				
Flow, GPD	5	2000000	0	1068160		
Total Suspended	3	7.0	4.0	5.3		
pH, Standard Units	5	7.2	6.8	7.0	4.0 - 9.0	0
		Discharge Point SD 700				
Flow, GPD	2	396200	0	301750		
pH, Standard Units	2	7.0	6.9	7.0	4.0 - 9.0	0
Total Suspended	2	11.6	6.8	9.2		
		Discharge Point SD 710				
Flow, GPD	12	2248700	45200	1113740		
Total Suspended	6	24	<2.0	<8.2		
pH, Standard Units	12	7.4	6.8	7.2	4.0 - 9.0	0
		Discharge Point SD 720				
Flow, GPD	1	90000	0	90000		
pH, Standard Units	1	7.2	7.2	7.2	4.0 - 9.0	0
Total Suspended	1	4.4	4.4	4.4		
		Discharge Point SD 750				
Flow, GPD	3	48540	1920	19075		
pH, Standard Units	3	7.4	7.0	7.2	4.0 - 9.0	0
Total Suspended	3	4.8	<2.0	<3.2		
		Discharge Point SD 760				
Flow, GPD	5	44180	0	17980		
pH, Standard Units	5	7.2	7.0	7.1	4.0 - 9.0	0
Total Suspended	3	4.8	<2.0	<2.2		
		Discharge Point SD 770				
Flow, GPD	1	19090	0	19090		
pH, Standard Units	1	7.3	7.3	7.3	4.0 - 9.0	0
Total Suspended	1	3.8	3.8	3.8		

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values exceeding reference
		Max	Min	Avg		
Discharge Point SD 780						
Flow, GPD	1	426000	426000	426000		
pH, Standard Units	1	7.1	7.1	7.1	4.0 - 9.0	0
Total Suspended	1	10.3	10.3	10.3		
Discharge Point SD 800						
Flow, GPD	1	47050	47050	47050		
pH, Standard Units	1	7.7	7.7	7.7		
Total Suspended	1	57.6	57.6	57.6		
Discharge Point SD 810						
Flow, GPD	1	4320	4320	4320		
pH, Standard Units	1	6.8	6.8	6.8	4.0 - 9.0	0
Total Suspended	1	11.8	11.8	11.8		
Discharge Point SD 820						
Flow, GPD	1	162300	162300	162300		
pH, Standard Units	1	7.3	7.3	7.3	4.0 - 9.0	0
Total Suspended	1	150.8	150.8	150.8		
Discharge Point SD 830						
Flow, GPD	1	277300	277300	277300		
pH, Standard Units	1	7.0	7.0	7.0	4.0 - 9.0	0
Total Suspended	1	11.6	11.6	11.6		
Discharge Point SD 850						
Flow, GPD	1	1440	1440	1440		
pH, Standard Units	1	7.0	7.0	7.0	4.0 - 9.0	
Total Suspended	1	5.0	5.0	5.0		
Discharge Point SD 860						
Flow, GPD	1	190	190	190		
pH, Standard Units	1	7.7	7.7	7.7	4.0 - 9.0	0
Total Suspended	1	57.6	57.6	57.6		
Discharge Point SD 880						
Flow, GPD	1	92830	92830	92830		
pH, Standard Units	1	7.2	7.2	7.2	4.0 - 9.0	0
Total Suspended	1	102.3	102.3	102.3		

Table 1.1 (continued)

Parameter	Number of samples	Concentration[a]			Reference Value[b]	No. of values exceeding reference
		Max	Min	Avg		
		Discharge Point SD 890				
Flow, GPD	2	312800	0	256500		
pH, Standard Units	2	7.4	7.1	7.3	4.0 - 9.0	0
Total Suspended	1	5.8	5.8	5.8		
		Discharge Point SD 892				
Flow, GPD	1	26080	26080	26080		
pH, Standard Units	1	7.4	7.4	7.4		
Total Suspended	1	7.0	7.0	7.0		
		Discharge Point SD 900				
Flow, GPD	3	99700	56700	84350		
pH, Standard Units	3	7.3	7.0	7.1	4.0 - 9.0	0
		Discharge Point SD 970				
Flow, GPD	1	248900	248900	248900		
pH, Standard Units	1	7.2	7.2	7.2		
		Discharge Point SD 980				
Flow, GPD	1	545900	545900	545900		
pH, Standard Units	1	6.8	6.8	6.8		
		Discharge Point SD 982				
Flow, GPD	1	513400	513400	513400		
pH, Standard Units	1	6.9	6.9	6.9		
		Discharge Point SD 990				
Flow, GPD	1	55620	55620	55620		
pH, Standard Units	1	7.2	7.2	7.2		
		Discharge Point SD 992				
Flow, GPD	6	1006600	0	359070		
Total Suspended	6	91.2	14.4	34.1		
pH, Standard Units	6	7.1	6.5	6.7	4.0 - 9.0	0
		Discharge Point SD 996				
Flow, GPD	2	195700	114600	155150		
pH, Standard Units	2	7.3	7.1	7.2		

[a] - Units are mg/L unless otherwise noted

[b] - NPDES permit limit

Table 1.2. Radionuclide concentrations at ETTP discharges and surface water monitoring locations

Radionuclide	No. of samples	Concentration (pCi/L)				DCG	Percent of DCG	Sum of the fractions of the DCGs
		Max	Min	Median	Average			
CRK-16								
U-234	2	2.4e-01	1.6e-01	2.0e-01	2.0e-01	5.0e+02	4.0e-02	4.0e-04
U-238	1	1.8e-01	1.8e-01	1.8e-01	1.8e-01	6.0e+02	3.0e-02	3.0e-04
Beta activity	2	5.8e+00	4.1e+00	5.0e+00	5.0e+00	a	a	A
All listed isotopes								7.9e-04

[a]Not applicable

[b]This calculated value includes sampling results that are at or below the detection limits and/or below background activities.

Table 1.3. Radionuclide concentrations at ETTP discharges and surface water monitoring locations

Radionuclide	No. of samples	Concentration (pCi/L)				DCG	Percent of DCG	Sum of the fractions of the DCGs
		Max	Min	Median	Average			
K-901-A (settling basin for surface water runoff)								
Gross Beta	2	1.1e+01	6.5e+00	8.8e+00	8.5e+00	*a*	*a*	*a*

[a]Not applicable
[b]This calculated value includes sampling results that are at or below the detection limits and/or below background activities.

Table 1.4. Radionuclide concentrations at ETTP discharges and surface water monitoring locations

Radionuclide	No. of samples	Concentration (pCi/L)				DCG	Percent of DCG	Sum of the fractions of the DCGs
		Max	Min	Median	Average			
K-1007-B (settling basin for surface water runoff)								
Beta Activity	2	5.9e+00	5.5e+00	5.7e+00	5.7e+00	a	a	a

[a]Not applicable
[b]This calculated value includes sampling results that are at or below the detection limits and/or below background activities.

Table 1.5. Radionuclide concentrations at ETTP discharges and surface water monitoring locations

Radionuclide	No. of samples	Concentration (pCi/L)				DCG	Percent of DCG	Sum of the fractions of the DCGs
		Max	Min	Median	Average			
K-1407-J (treated effluents from Central Neutralization Facility and TSCA Incinerator)								
C-14	12	8.6e+03	0.0e+00	1.8e+03	2.2e+03	7.0e+04	3.2e-03	3.2e-05
Cs-137	12	1.2e+01	0.0e+00	0.0e+00	9.8e-01	3.0e+03	3.2e-02	3.2e-04
H-3	12	1.1e+03	0.0e+00	0.0e+00	2.5e+02	2.0e+06	1.2e-02	1.2e-04
Np-237	12	1.0e-01	0.0e+00	0.0e+00	8.3e-03	3.0e+01	2.8e-02	2.8e-04
Pu-238	12	1.7e-01	0.0e+00	0.0e+00	1.4e-02	4.0e+01	3.5e-02	3.5e-04
Pu-239	12	1.7e-01	0.0e+00	0.0e+00	5.2e-02	3.0e+01	1.7e-01	1.7e-03
Tc-99	12	8.1e+03	1.9e+02	1.7e+03	2.1e+03	1.0e+05	2.1e+00	2.1e-02
Th-230	11	5.5e+01	0.0e+00	0.0e+00	8.2e+00	3.0e+02	2.7e+00	2.7e-02
Th-234	12	1.1e+00	0.0e+00	0.0e+00	9.2e+00	1.0e+04	9.2e-02	9.2e-04
U-234	12	7.6e+01	5.6e+00	1.4e+01	2.3e+01	5.0e+02	4.6e+00	4.6e-02
U-235	12	6.8e+00	0.0e+00	1.0e+00	1.8e+00	6.0e+02	2.9e-01	2.9e-03
U-236	12	5.1e+00	0.0e+00	7.4e-01	1.1e+00	5.0e+02	2.2e-01	2.2e-03
U-238	12	1.7e+02	7.5e+00	2.0e+01	4.1e+01	6.0e+02	6.8e+00	6.8e-02
Gross Alpha	12	2.5e+02	0.0e+00	3.1e+01	5.3e+01	*a*	*a*	*a*
Gross Beta	12	3.3e+03	5.6e+01	2.4e+02	6.1e+02	*a*	*a*	*a*
All listed isotopes								1.7e-01

[a]Not applicable
[b]This calculated value includes sampling results that are at or below the detection limits and/or below background activities.

Table 1.6. Radionuclide concentrations at ETTP discharges and surface water monitoring locations

Radionuclide	No. of samples	Concentration (pCi/L)				DCG	Percent of DCG	Sum of the fractions of the DCGs
		Max	Min	Median	Average			
				K-1700 (Mitchell Branch)				
U-234	4	7.8e+00	4.8e+00	5.5e+00	5.9e+00	5.0e+02	1.2e-00	1.2e-02
U-235	2	1.4e+00	3.3e-01	4.5e-01	6.6e-01	6.0e+02	1.1e-01	1.1e-03
U-238	4	4.8e+00	2.1e+00	3.5e+00	3.5e+00	6.0e+02	5.8e-01	5.8e-03
Tc-99	4	1.1e+01	5.4e+00	6.4e+00	7.3e+00	1.0e+05	7.3e-03	7.3e-05
Gross Alpha	3	8.9e+00	4.3e+00	6.4e+00	6.4e+00	*a*	*a*	*A*
Gross Beta	4	9.8e+00	6.0e+00	8.1e+00	8.0e+00	*a*	*a*	*a*
All listed isotopes								1.9e-02

[a]Not applicable
[b]This calculated value includes sampling results that are at or below the detection limits and/or below background activities.

Table 1.7. 2004 ETTP parameters detected at CRK-16

Parameter	Number detected/ number of samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
Aluminum (mg/L)	9/10	0.83	<0.016	<0.22		
Calcium (mg/L)	10/10	39	23	35		
Dissolved oxygen (mg/L)	10/10	13	7.9	11	5.0 min	0
Iron (mg/L)	10/10	0.74	0.01	0.29		
Magnesium (mg/L)	10/10	11	6.4	9.6		
Manganese (mg/L)	10/10	0.071	0.02	0.042		
pH (standard units)	10/10	7.8	7.1	7.4	6.5-8.5	0
Potassium (mg/L)	10/10	2.5	1.8	2.1		
Sodium (mg/L)	10/10	5.7	3.2	5.1		
Temperature (C^o)	10/10	23	7.0	16		
Zinc (mg/L)	8/10	0.0061	<0.00065	<0.0027	0.12	0

[a] All reference values are Tennessee Water Quality Criteria for fish and aquatic life.

Table 1. 8. 2004 ETTP parameters detected at K-716

Parameter	Number detected/ number of samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
Dissolved Oxygen (mg/L)	2/2	12	10	11	5.0 min	0
pH (standard units)	2/2	7.0	6.5	6.8	6.5 - 8.5	0
Temperature (C^o)	2/2	25	14	19		

[a] All reference values are Tennessee Water Quality Criteria for fish and aquatic life.

Table 1.9. 2004 ETTP parameters detected at K-901-A

Parameter	Number detected/ number of samples	Detected Results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
Aluminum (mg/L)	2/2	0.21	0.058	0.13		
Calcium (mg/L)	2/2	40	32	36		
Dissolved Oxygen (mg/L)	2/2	8.9	2.4	5.7	5.0 min	1
Iron (mg/L)	2/2	0.66	0.23	0.45		
Magnesium (mg/L)	2/2	12	11	12		
Manganese (mg/L)	2/2	0.16	0.0034	0.097		
pH (standard units)	2/2	7.3	7.3	7.3	6.5-8.5	0
Potassium (mg/L)	2/2	1.8	1.5	1.7		
Sodium (mg/L)	2/2	1.0	0.8	0.9		
Temperature (C^o)	2/2	24	11	18		
Zinc (mg/L)	2/2	0.014	0.0095	0.012	0.12	0

[a] All reference values are Tennessee Water Quality Criteria for fish and aquatic life.

Table 1.10. 2004 ETTP parameters detected at K-1007-B

Parameter	Number detected/ number of samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
Aluminum (mg/L)	2/2	0.13	0.087	0.11		
Calcium (mg/L)	2/2	36	32	34		
Dissolved Oxygen	2/2	9.4	5.4	7.4	5.0 min	0
Iron (mg/L)	2/2	0.27	0.21	0.24		
Magnesium (mg/L)	2/2	10	7.4	8.7		
Manganese (mg/L)	2/2	0.1	0.063	0.082		
pH (standard units)	2/2	7.8	7.5	7.7	6.5 - 8.5	0
Potassium (mg/L)	2/2	3.1	2.5	2.8		
Sodium (mg/L)	2/2	3.5	1.8	2.7		
Temperature (C^o)	2/2	27	13	20		
Zinc (mg/L)	2/2	0.0052	0.003	0.0041	0.12	0

[a] All Reference values are Tennessee Water Quality Standards for fish and aquatic life.

Table 1.11. 2004 ETTP parameters detected at K-1700

Parameter	Number detected/ number of samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
1,1-Dichloroethane (mg/L)	4/4	0.0014	0.00092	0.0012		
Barium (mg/L)	4/4	0.056	0.042	0.050		
Calcium (mg/L)	4/4	70	43	59		
Chloroform (mg/L)	4/4	0.005	0.0012	0.0032	4.7	0
cis-1,2 Dichloroethene	4/4	0.076	0.026	0.046		
Dissolved Oxygen (mg/L)	4.4	12	6.1	9.5	5.0 min	0
Iron (mg/L)	4/4	0.2	0.15	0.18		
Magnesium (mg/L)	4/4	13	9.9	12		
Manganese (mg/L)	4/4	0.26	0.11	0.17		
Nickel (mg/L)	4/4	0.011	0.0071	0.0085	1.4	0
Potassium (mg/L)	4/4	2.9	1.8	2.4		
Sodium (mg/L)	4/4	8.2	5.0	6.6		
Temperature (C^o)	4/4	23	8.1	16		
Trichloroethene (mg/L)	4/4	0.082	0.028	0.053	0.810	0
Vinyl Chloride (mg/L)	4/4	0.0058	0.0032	0.0044	5.3	
pH (standard units)	4/4	7.2	7.0	7.1	6.5 - 8.5	0
Zinc (mg/L)	4/4	0.015	0.0027	0.0072	0.12	0

[a] All Reference values are Tennessee Water Quality Standards for fish and aquatic life.

Table 1.12. 2004 ETTP parameters detected at K-1710

Parameter	Number detected/ number of samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
Dissolved Oxygen (mg/L)	2/2	11	7.2	9.1	5.0 min	0
pH (standard units)	2/2	7	5.8	6.4	6.5 - 8.5	1
Temperature (C^o)	2/2	24	12	18		

[a] All Reference values are Tennessee Water Quality Standards for fish and aquatic life.

Table 1.13. 2004 ETTP parameters detected at MIK 1.4

Parameter	Number detected/ number of samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
Aluminum (mg/L)	4/4	0.3	0.042	0.12		
Barium (mg/L0	4/4	0.07	0.035	0.050		
Calcium (mg/L)	4/4	64	11	28		
Dissolved Oxygen (mg/L)	4/4	11	6.0	8.8	5.0 min.	0
Iron (mg/L)	4/4	1.3	0.23	0.52		
Magnesium (mg/L)	4/4	13	6.0	10		
Manganese (mg/L)	4/4	0.58	0.21	0.33		
Nickel (mg/L)	4/4	0.01	0.0014	0.0038	1.4	0
pH (standard units)	4/4	7.3	6.5	6.8	6.5 - 8.5	6
Potassium (mg/L)	4/4	2.6	0.8	1.4		
Sodium (mg/L)	3/4	8.1	0.71	2.7		
Temperature (C^o)	4/4	22	6.8	14		
Zinc (mg/L)	3/4	0.0051	<0.000	<0.0029	0.12	0

[a] All Reference values are Tennessee Water Quality Standards for fish and aquatic life.

Table 1.14. 2004 ETTP parameters detected at K-700 Slough

Parameter	Number detected/ number of samples	Detected results			Reference Value[a]	Number of values exceeding reference
		Max	Min	Avg		
Aluminum (mg/L)	1/1	0.32	0.32	0.32		
Calcium (mg/L)	1/1	41	41	41		
Dissolved Oxygen	1/1	7.1	7.1	7.1	5.0 min	0
Iron (mg/L)	1/1	0.67	0.67	0.67		
Magnesium (mg/L)	1/1	7	7	7		
Manganese (mg/L)	1/1	0.24	0.24	0.24		
pH (standard units)	1/1	6.8	6.8	6.8	6.5 - 8.5	0
Potassium (mg/L)	1/1	2.8	2.8	2.8		
Sodium	1/1	3.1	3.1	3.1		
Temperature (C^o)	1/1	15	15	15		

[a] All Reference values are Tennessee Water Quality Standards for fish and aquatic life.

Table 2.1. Major sources of radiological airborne emissions at ORNL, 2004 (Ci)[a]

Isotope	Stack				
	X-2026	X-3020	X-3039	X-7503[b]	X-7911
^{228}Ac	5.83E-08		5.61E-07	3.61E-08	3.93E-07
^{110m}Ag		2.49E-08			
^{241}Am	4.88E-07	1.48E-07	2.87E-07	5.43E-09	
^{242}Am				5.90E-10	
^{243}Am				5.90E-10	
^{41}Ar					2.03E+03
^{139}Ba			1.97E-03		4.62E-01
^{140}Ba	3.90E-07				1.47E-04
^{7}Be	1.03E-07	4.53E-07	1.12E-05	7.71E-08	5.31E-07
^{212}Bi	1.22E-07				
^{214}Bi			3.18E-07		2.02E-07
^{252}Cf					9.13E-09
^{244}Cm	1.29E-06	2.89E-08	1.62E-07	3.99E-08	6.21E-08
^{246}Cm	6.41E-09	4.27E-09		2.59E-09	
^{57}Co		1.56E-08	1.27E-06		
^{60}Co			6.66E-06		
^{134}Cs				7.29E-09	
^{137}Cs	3.12E-06	1.01E-06	2.91E-04		4.67E-06
^{138}Cs					1.72E+03
^{152}Eu			1.84E-06		
^{155}Eu	8.14E-08		3.75E-07		
^{59}Fe					1.97E-07
^{3}H	3.26E-02		1.94E+01	1.43E+00	6.64E+01
^{203}Hg					1.31E-07
^{131}I	7.76E-06		1.15E-06		4.70E-02
^{132}I					8.25E-01
^{133}I					2.88E-01
^{134}I					1.01E+00
^{135}I					1.00E+00
^{40}K				1.50E-07	1.38E-06
^{85}Kr					2.16E+02
^{85m}Kr					5.23E-02
^{87}Kr					8.95E+01
^{88}Kr					4.76E+01
^{89}Kr					2.94E+01

Table 2.1 (continued)

Isotope	Stack				
	X-2026	X-3020	X-3039	X-7503[b]	X-7911
^{140}La					1.58E-04
^{94}Nb					5.49E-08
^{95}Nb					1.15E-07
^{239}Np			6.65E-07		
^{147}Nd				1.17E-06	
^{191}Os			2.43E-01		
^{210}Pb	2.93E-06			2.36E-06	
^{212}Pb	6.12E-01		1.09E+00	9.04E-02	7.99E-02
^{214}Pb					1.20E-07
^{238}Pu	4.92E-08	2.52E-08	3.16E-08	2.89E-09	9.11E-10
^{239}Pu	1.24E-07	1.63E-07	9.13E-07	8.57E-09	1.54E-09
^{244}Pu	6.37E-09	3.51E-09	1.69E-08	1.92E-09	1.57E-08
^{228}Ra	5.83E-08		5.61E-07	3.61E-08	3.93E-07
^{75}Se			3.96E-03		
^{90}Sr	3.86E-07	7.70E-07	8.90E-05	1.21E-08	5.00E-06
^{228}Th	4.05E-08	5.29E-09	1.10E-08	2.70E-09	1.59E-08
^{230}Th	1.43E-08	9.00E-10	2.52E-08	1.91E-09	3.83E-08
^{232}Th	1.46E-09	1.20E-09	8.44E-09	8.10E-10	1.17E-08
^{234}Th			2.74E-06		
^{234}U	1.79E-07	8.12E-08	2.22E-07	1.24E-08	2.98E-08
^{235}U	2.75E-09	3.96E-09	2.02E-08	6.68E-10	1.86E-09
^{238}U	2.90E-09	4.61E-09	3.40E-08	1.95E-09	1.44E-08
^{131m}Xe					1.57E+00
^{133}Xe					6.37E-03
^{133m}Xe					4.43E+00
^{135}Xe					5.79E+01
^{135m}Xe					2.58E+02
^{137}Xe					1.42E+02
^{138}Xe					2.33E+02
^{90}Y	3.86E-07	7.70E-07	8.90E-05	1.21E-08	5.00E-06

[a]1 Ci = 3.7E+10 Bq.
[b]Formerly 7512.

Table 2.2. Constituents in Waste Area Grouping (WAG) 1 at ORNL, March 2004 (a)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Reference value	Number of values exceeding Reference [ref](d)
			Downgradient Wells			
Field measurements						
Conductivity (mS/cm)	4/4	0.57	1.2	0.89	n/a	n/a
Dissolved Oxygen (ppm)	4/4	1.9	3.5	2.6	n/a	n/a
pH (Std Unit)	4/4	6.9	10	n/a	n/a	n/a
Temperature (deg C)	4/4	11	14	12	30.5	0[1]
Turbidity (NTU)	4/4	0.0	10	4.5	1	2[2]
Radionuclides (pCi/L) (e)						
Beta activity	1/4	U1.9*	5.0*	~3.2*	50	0[2]
Lead-214	2/2	7.8*	26*	17	n/a	n/a
Strontium-89/90	2/4	U-0.037	1.9*	~0.76	40	0[4]
Tritium	3/4	U160*	890*	~370	20,000	0[2]

(a) All values were included in the calculations. Only parameters that have detections in one or more samples are listed in the table. The sampling and analysis plan contains a complete list of analyses performed.
(b) Prefix "U" indicates that the value was undetected at the MDA.
(c) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(d) If a reference limit exists, the source is coded as:
1 Rules of Tennessee Department of Environment and Conservation, Division of Water Pollution Control, Chapter 1200-4-3, General Water Quality Criteria, Domestic Water Supply, as amended.
2 40 CFR Part 141--National Primary Drinking Water Regulations, Subparts B and G, as amended.
3 40 CFR Part 143--National Secondary Drinking Water Regulations, as amended.
4 DOE Order 5400.5, Chapter III, Derived Concentration Guides for Air and Water.
(e) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected above MDA.

Table 2.3. Constituents in Waste Area Grouping (WAG) 2 at ORNL, April 2004 (a)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Reference value	Number of values exceeding reference [ref](d)
			Downgradient Wells			
Field measurements						
Conductivity (mS/cm)	8/8	0.26	0.95	0.61	n/a	n/a
Dissolved Oxygen (ppm)	8/8	1.4	5.6	2.4	n/a	n/a
pH (Std Unit)	8/8	6.4	9.8	n/a	n/a	n/a
Temperature (deg C)	8/8	14	19	16	30.5	0[1]
Turbidity (NTU)	8/8	0.0	480	97	1	7[2]
Metals (mg/L)						
Aluminum	3/4	<0.0091	0.046	~0.027	(0.05, 0.2)	4[3]
Antimony	1/4	<0.00028	0.00093	~0.00044	0.006	0[1]
Barium	4/4	0.099	0.68	0.31	2	0[1]
Boron	4/4	0.0049	0.073	0.03	n/a	n/a
Cadmium	2/4	<0.00004	0.00019	~0.00008	0.005	0[1]
Calcium	4/4	46	290	140	n/a	n/a
Chromium	2/4	<0.00038	0.12	~0.054	1	0[1]
Cobalt	4/4	0.00022	0.0069	0.0023	n/a	n/a
Copper	3/4	<0.00069	0.0066	~0.0023	1.3	0[2]
Iron	4/4	0.51	18	5.2	0.3	4[3]
Lead	4/4	0.00009	0.00082	0.00044	0.005	0[1]
Lithium	4/4	0.00028	0.023	0.012	n/a	n/a
Magnesium	4/4	E3.7	E20	~14	n/a	n/a
Manganese	4/4	0.019	0.19	0.1	0.05	3[3]
Molybdenum	3/4	<0.0002	0.0015	~0.00085	n/a	n/a
Nickel	4/4	0.0036	0.22	0.084	0.1	1[1]

Table 2.3 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Reference value	Number of values exceeding reference [ref](d)
Phosphorous	4/4	0.012	0.12	0.052	n/a	n/a
Potassium	4/4	1.0	3.0	2.2	n/a	n/a
Selenium	3/4	0.0028	<0.0064	~0.0045	0.05	0[1]
Silicon	4/4	2.4	9.3	7.0	n/a	n/a
Silver	3/4	<0.00004	0.00035	~0.00021	0.1	0[3]
Sodium	4/4	11	24	15	n/a	n/a
Strontium	4/4	0.089	0.66	0.33	n/a	n/a
Sulfur	4/4	0.32	6.6	4.0	n/a	n/a
Thallium	4/4	0.00004	0.00064	0.00021	0.002	0[1]
Titanium	4/4	0.00087	0.0033	0.0016	n/a	n/a
Uranium	4/4	0.00008	0.0025	0.0013	n/a	n/a
Vanadium	1/4	<0.0054	0.032	~0.012	n/a	n/a
Zinc	4/4	0.0026	0.029	0.0095	5	0[3]
Zirconium	1/4	<0.00022	0.001	~0.00042	n/a	n/a
Radionuclides (pCi/L) (e)						
Alpha activity	2/8	U-2.5	11*	~3.2*	15	0[2]
Beta activity	1/8	U-1.9	260*	~35	50	1[2]
Strontium-89/90	1/8	U-0.75	130*	~16	40	1[4]
Tritium	5/8	U23	32,000*	~8,000	20,000	2[2]
Upgradient Wells						
Field measurements						
Conductivity (mS/cm)	10/10	0.38	0.78	0.57	n/a	n/a
Dissolved Oxygen (ppm)	10/10	0.9	6.7	3.3	n/a	n/a
pH (Std Unit)	10/10	6.6	9.6	n/a	n/a	n/a

Table 2.3 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Reference value	Number of values exceeding reference [ref](d)
Temperature (deg C)	10/10	12	17	14	30.5	0[1]
Turbidity (NTU)	10/10	0.0	290	35	1	8[2]
Radionuclides (pCi/L) (e)						
Alpha activity	2/10	U-0.54	7.8*	~2.0*	15	0[2]
Beta activity	1/10	U-2.2	15*	~2.3	50	0[2]
Lead-214	1/1	9.2*	9.2*	n/a	n/a	n/a
Potassium-40	3/10	U0.0	52*	~21*	280	0[4]
Strontium-89/90	1/10	U-0.93	4.7*	~0.34	40	0[4]
Tritium	6/10	U-87	340,000*	~35,000	20,000	1[2]

(a) All values were included in the calculations. Only parameters that have detections in one or more samples are listed in the table. The sampling and analysis plan contains a complete list of analyses performed.
(b) Prefix "U" indicates that the value was undetected at the MDA; "E" indicates that the percent difference between the parent sample and its serial dilution's concentration exceeds 10%; and "<" indicates the value for a parameter was not quantifiable at the analytical detection limit.
(c) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(d) If a reference limit exists, the source is coded as:
1 Rules of Tennessee Department of Environment and Conservation, Division of Water Pollution Control, Chapter 1200-4-3, General Water Quality Criteria, Domestic Water Supply, as amended.
2 40 CFR Part 141--National Primary Drinking Water Regulations, Subparts B and G, as amended.
3 40 CFR Part 143--National Secondary Drinking Water Regulations, as amended.
4 DOE Order 5400.5, Chapter III, Derived Concentration Guides for Air and Water.
(e) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected above MDA.

Table 2.4. Constituents in Waste Area Grouping (WAG) 8 at ORNL, April 2004 (a)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Reference value	Number of values exceeding reference [ref] (d)
Downgradient Wells						
Field measurements						
Conductivity (mS/cm)	7/7	0.28	0.97	0.52	n/a	n/a
Dissolved Oxygen (ppm)	7/7	0.5	4.8	2.5	n/a	n/a
pH (Std Unit)	7/7	6.4	9.9	n/a	n/a	n/a
Temperature (deg C)	7/7	13	17	15	30.5	0[1]
Turbidity (NTU)	7/7	0.0	320	74	1	5[2]
Radionuclides (pCi/L) (e)						
Alpha activity	1/7	U-0.65	21*	~3.7	15	1[2]
Beta activity	3/7	U-1.8	1,600*	~230	50	1[2]
Strontium-89/90	2/7	U-0.13	920*	~130	40	1[4]
Thorium-230	1/1	0.74*	0.74*	n/a	12	0[4]
Tritium	4/7	U30	400*	~180*	20,000	0[2]
Upgradient Wells						
Field measurements						
Conductivity (mS/cm)	2/2	0.52	0.57	0.55	n/a	n/a
Dissolved Oxygen (ppm)	2/2	2.0	2.0	2.0	n/a	n/a
pH (Std Unit)	2/2	6.9	7.8	n/a	n/a	n/a
Temperature (deg C)	2/2	15	15	15	30.5	0[1]
Turbidity (NTU)	2/2	3.0	280	140	1	2[2]
Radionuclides (pCi/L) (e)						
Beta activity	2/2	2.7*	3.1*	2.9*	50	0[2]
Tritium	1/2	U63	31,000*	~16,000	20,000	1[2]

(a) All values were included in the calculations. Only parameters that have detections in one or more samples are listed in the table. The sampling and analysis plan contains a complete list of analyses performed.
(b) Prefix "U" indicates that the value was undetected at the MDA.
(c) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(d) If a reference limit exists, the source is coded as:
1 Rules of Tennessee Department of Environment and Conservation, Division of Water Pollution Control, Chapter 1200-4-3, General Water Quality Criteria, Domestic Water Supply, as amended.
2 40 CFR Part 141--National Primary Drinking Water Regulations, Subparts B and G, as amended.
3 40 CFR Part 143--National Secondary Drinking Water Regulations, as amended.
4 DOE Order 5400.5, Chapter III, Derived Concentration Guides for Air and Water.
(e) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected above MDA.

Table 2.5. Constituents in Waste Area Grouping (WAG) 17 at ORNL, March 2004 (a)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Reference value	Number of values exceeding reference [ref] (d)
			Downgradient Wells			
Field measurements						
Conductivity (mS/cm)	4/4	0.54	0.79	0.69	n/a	n/a
Dissolved Oxygen (ppm)	4/4	0.9	4.2	2.9	n/a	n/a
pH (Std Unit)	4/4	7.0	7.3	n/a	n/a	n/a
Temperature (deg C)	4/4	14	17	16	30.5	0[1]
Turbidity (NTU)	4/4	1.0	4.0	2.0	1	2[2]
Radionuclides (pCi/L) (e)						
Alpha activity	1/4	U0.11	6.1*	~2.2	15	0[2]
Tritium	4/4	340*	2,400*	1,000	20,000	0[2]
Volatile organics (µg/L)						
1,1,1-Trichloroethane	1/4	U1.0	1.1	~1.0	200	0[1]
1,1-Dichloroethene	1/4	U1.0	8.2	~2.8	7	1[1]
1,2-Dichloroethene	3/4	J0.76	D2,200	~560	n/a	n/a
Benzene	1/4	U1.0	7.3	~2.6	5	1[1]
Tetrachloroethene	1/4	U1.0	8.1	~2.8	5	1[1]
Trichloroethene	3/4	J0.44	D7,500	~1,900	5	2[1]
Vinyl chloride	1/4	U1.0	17	~5.0	2	1[1]
			Upgradient Wells			
Field measurements						
Conductivity (mS/cm)	4/4	0.48	0.72	0.63	n/a	n/a
Dissolved Oxygen (ppm)	4/4	1.8	2.4	2.1	n/a	n/a
pH (Std Unit)	4/4	6.8	8.0	n/a	n/a	n/a
Temperature (deg C)	4/4	13	15	15	30.5	0[1]
Turbidity (NTU)	4/4	1.0	3.0	2.3	1	3[2]

Table 2.5 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Reference value	Number of values exceeding reference [ref] (d)
Radionuclides (pCi/L) (e)						
Bismuth-214	2/2	21*	21*	21*	24,000	0[4]
Lead-214	2/2	21*	23*	22*	n/a	n/a
Tritium	4/4	380*	2,900*	1,700*	20,000	0[2]

(a) All values were included in the calculations. Only parameters that have detections in one or more samples are listed in the table. The sampling and analysis plan contains a complete list of analyses performed.
(b) Prefix "J" indicates the value was estimated at or below the analytical detection limit by the laboratory; "U" indicates that the value was undetected at the analytical detection limit; and "D" indicates analyte was quantified in an analysis performed at a secondary dilution factor.
(c) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(d) If a reference limit exists, the source is coded as:
1 Rules of Tennessee Department of Environment and Conservation, Division of Water Pollution Control, Chapter 1200-4-3, General Water Quality Criteria, Domestic Water Supply, as amended.
2 40 CFR Part 141--National Primary Drinking Water Regulations, Subparts B and G, as amended.
3 40 CFR Part 143--National Secondary Drinking Water Regulations, as amended.
4 DOE Order 5400.5, Chapter III, Derived Concentration Guides for Air and Water.
(e) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected above MDA.

Table 2.6. ORNL Plant Perimeter Monitoring summary statistics from 2004 sampling events (a)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Reference value	Number of values exceeding Reference [ref] (d)
			Melton Valley Exit Pathway			
Field measurements						
Conductivity (mS/cm)	11/11	0.02	0.85	0.38	n/a	n/a
Dissolved Oxygen (ppm)	11/11	1.4	8.1	4.0	n/a	n/a
pH (Std Unit)	11/11	5.2	9.5	n/a	n/a	n/a
Temperature (deg C)	11/11	12	19	15	30.5	0[2]
Turbidity (NTU)	10/10	0.0	68	17	1	5[3]
Metals (mg/L) -- Unfiltered						
Aluminum	8/10	<0.009	2.0	~0.28	(0.05, 0.2)	9[4]
Antimony	2/10	<0.00028	0.00093	~0.00036	0.006	0[2]
Arsenic	1/10	<0.001	0.004	~0.0014	0.01	0[2]
Barium	10/10	0.018	0.68	0.19	2	0[2]
Beryllium	2/10	<0.00008	0.0004	~0.00014	0.004	0[2]
Boron	10/10	0.0049	0.82	0.13	n/a	n/a
Cadmium	6/10	<0.00004	0.00019	~0.000068	0.005	0[2]
Calcium	10/10	0.36	290	64	n/a	n/a
Chromium	8/10	<0.00038	0.12	~0.026	1	0[2]
Cobalt	8/10	0.0	0.0069	0.0012	n/a	n/a
Copper	6/10	<0.00069	0.0066	~0.0018	1.3	0[3]
Iron	10/10	0.048	18	2.3	0.3	6[4]
Lead	10/10	0.00009	0.009	0.0013	0.005	1[2]
Lithium	10/10	0.00028	0.039	0.015	n/a	n/a
Magnesium	10/10	0.26	E20	~7.4	n/a	n/a
Manganese	9/10	<0.002	0.19	~0.048	0.05	3[4]
Molybdenum	7/10	<0.0002	0.004	~0.0012	n/a	n/a
Nickel	10/10	0.0005	0.22	0.036	0.1	1[2]
Phosphorous	8/10	<0.01	0.12	~0.035	n/a	n/a
Potassium	10/10	0.45	3.3	1.9	n/a	n/a
Selenium	8/10	<0.001	<0.0064	~0.0032	0.05	0[2]
Silicon	10/10	2.4	9.3	6.7	n/a	n/a
Silver	7/10	<0.00004	0.00035	~0.00013	0.1	0[4]
Sodium	10/10	E0.8	E230	~36	n/a	n/a
Strontium	10/10	0.003	0.66	0.21	n/a	n/a
Sulfur	10/10	0.061	12	3.6	n/a	n/a
Thallium	6/10	<0.00002	0.00064	~0.00013	0.002	0[2]
Thorium	2/10	<0.00009	0.001	~0.00039	n/a	n/a
Titanium	10/10	0.00087	0.029	0.0057	n/a	n/a

Table 2.6 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Reference value	Number of values exceeding Reference [ref] (d)
Uranium	9/10	<0.00002	0.0025	~0.00078	n/a	n/a
Vanadium	1/10	<0.005	0.032	~0.0078	n/a	n/a
Zinc	10/10	0.002	0.029	0.0092	5	0[4]
Zirconium	5/10	0.00004	0.002	0.00053	n/a	n/a
Radionuclides (pCi/L) (e) -- Filtered						
Alpha activity	1/1	35*	35*	n/a	15	2[3]
Beta activity	1/1	280*	280*	n/a	50	3[3]
Cesium-137	1/1	14*	14*	n/a	120	0[1]
Strontium-89/90	1/1	140*	140*	n/a	40	3[1]
Tritium	1/1	68,000*	68,000*	n/a	80,000	0[1]
Radionuclides (pCi/L) (e) -- Unfiltered						
Alpha activity	2/11	U-1.4	32*	~4.8	15	2[3]
Beta activity	2/11	U-1.9	340*	~55	50	3[3]
Bismuth-214	3/3	10*	52*	31	24,000	0[1]
Cesium-137	1/1	26*	26*	n/a	120	0[1]
Lead-214	2/2	34*	57*	45	n/a	n/a
Potassium-40	2/10	U0.0	U37*	~16*	280	0[1]
Strontium-89/90	2/11	U-0.27	140*	~25	40	3[1]
Tritium	8/11	U31	69,000*	~12,000	80,000	0[1]
Volatile organics (µg/L) -- Unfiltered						
Chloroform	1/11	J0.48	U1.0	~0.95	100	0[3]
Toluene	1/11	J0.45	U1.0	~0.95	1,000	0[2]

(a) All values were included in the calculations. Only parameters that have detections in one or more samples are listed in the table. The sampling and analysis plan contains a complete list of analyses performed.
(b) Prefix "J" indicates the value was estimated at or below the analytical detection limit by the laboratory; "U" indicates that the value was undetected at the analytical detection limit or MDA; "E" indicates that the percent difference between the parent sample and its serial dilution's concentration exceeds 10%; and "<" indicates the value for a parameter was not quantifiable at the analytical detection limit.
(c) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(d) If a reference limit exists, the source is coded as:
1 DOE Order 5400.5, Chapter III, Derived Concentration Guides for Air and Water.
2 Rules of Tennessee Department of Environment and Conservation, Division of Water Pollution Control, Chapter 1200-4-3, General Water Quality Criteria, Domestic Water Supply, as amended.
3 40 CFR Part 141--National Primary Drinking Water Regulations, Subparts B and G, as amended.
4 40 CFR Part 143--National Secondary Drinking Water Regulations, as amended.
(e) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected above MDA.

Table 2.7. 2004 radionuclide concentrations in surface waters around ORNL

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max (a)	Avg (b)	Standard error (c)	DCG(d)	Percent of DCG(e)
			White Oak Creek Headwaters				
Alpha activity	4/12	0.0	8.4*	2.7*	0.68	n/a	n/a
Beta activity	1/12	-2.5	7.9*	2.2*	1.0	n/a	n/a
Carbon-14	0/12	-48	150	45*	16	70,000	n/a
Cesium-137	0/12	-1.2	1.6	0.26	0.26	3,000	n/a
Cobalt-60	0/12	-0.47	2.7*	0.94*	0.3	5,000	n/a
Tritium	0/12	-970	320	-82	97	2,000,000	n/a

(a) Individual radionuclide concentrations significantly greater than zero are identified by an *.
(b) Average radionuclide concentrations significantly greater than zero are identified by an *.
(c) Standard error of the mean.
(d) Derived concentration guide for ingestion of water. From DOE Order 5400.5.
(e) Average concentration as a percentage of the derived concentration guide (DCG), calculated only when a DCG exists and when at least one result is detected above MDA.

Table 2.8. 2004 radionuclide concentrations in stormwater at ORNL NPDES permitted locations

Parameter	Result detected above MDA?	Concentration (pCi/L)(a)	Percent of DCG(b)	Percent of DCG(c)
		Outfall 004		
Alpha activity		0.76	n/a	n/a
Beta activity	yes	240*	n/a	n/a
Cesium-137	yes	41*	3,000	1.4
Cobalt-60		0.32	5,000	n/a
Tritium		490*	2,000,000	n/a
		Outfall 011		
Alpha activity		0.66	n/a	n/a
Beta activity		6.6*	n/a	n/a
Cesium-137		-0.81	3,000	n/a
Cobalt-60		-1.4	5,000	n/a
Tritium		440*	2,000,000	n/a
		Outfall 091		
Alpha activity		1.7	n/a	n/a
Beta activity		0.15	n/a	n/a
Cesium-137		0.83	3,000	n/a
Cobalt-60		-0.82	5,000	n/a
Tritium		-260	2,000,000	n/a
		Outfall 092		
Alpha activity		0.052	n/a	n/a
Beta activity		2.2	n/a	n/a
Cesium-137		-3.5	3,000	n/a
Cobalt-60		0.52	5,000	n/a
Tritium	yes	4,800*	2,000,000	0.24
		Outfall 101		
Alpha activity		2.8*	n/a	n/a
Beta activity	yes	15*	n/a	n/a
Cesium-137		0.69	3,000	n/a
Cobalt-60		-1.4	5,000	n/a
Tritium		620*	2,000,000	n/a

Table 2.8 (continued)

Parameter	Result detected above MDA?	Concentration (pCi/L)(a)	Percent of DCG(b)	Percent of DCG(c)
		Outfall 111		
Alpha activity	yes	2.4*	n/a	n/a
Beta activity		3.1	n/a	n/a
Cesium-137		1.8	3,000	n/a
Cobalt-60		-0.31	5,000	n/a
Tritium		32	2,000,000	n/a
		Outfall 114		
Alpha activity	yes	2.8*	n/a	n/a
Beta activity	yes	7.2*	n/a	n/a
Cesium-137		1.6*	3,000	n/a
Cobalt-60		1.4*	5,000	n/a
Tritium		-25	2,000,000	n/a
		Outfall 164		
Alpha activity		0.19	n/a	n/a
Beta activity	yes	26*	n/a	n/a
Cesium-137		0.75	3,000	n/a
Cobalt-60		0.74	5,000	n/a
Tritium		10	2,000,000	n/a
		Outfall 165		
Alpha activity	yes	5.6*	n/a	n/a
Beta activity	yes	72*	n/a	n/a
Cesium-137		1.7	3,000	n/a
Cobalt-60		0.85	5,000	n/a
Tritium		300	2,000,000	n/a
		Outfall 191		
Alpha activity		1.2*	n/a	n/a
Beta activity		2.6	n/a	n/a
Cesium-137		0.67	3,000	n/a
Cobalt-60		0.38	5,000	n/a
Tritium		130	2,000,000	n/a

Table 2.8 (continued)

Parameter	Result detected above MDA?	Concentration (pCi/L)(a)	Percent of DCG(b)	Percent of DCG(c)
		Outfall 204		
Alpha activity		3.4*	n/a	n/a
Beta activity	yes	240*	n/a	n/a
Cesium-137	yes	23*	3,000	0.77
Cobalt-60		0.14	5,000	n/a
Tritium	yes	7,900*	2,000,000	0.4
		Outfall 208		
Alpha activity		-1.7	n/a	n/a
Beta activity		5.8*	n/a	n/a
Cesium-137		0.97	3,000	n/a
Cobalt-60		0.4	5,000	n/a
Tritium		120	2,000,000	n/a
		Outfall 209		
Alpha activity	yes	3.1*	n/a	n/a
Beta activity		7.0*	n/a	n/a
Cesium-137		-0.9	3,000	n/a
Cobalt-60		1.9	5,000	n/a
Tritium		-460	2,000,000	n/a
		Outfall 210		
Alpha activity		-2.0	n/a	n/a
Beta activity		0.21	n/a	n/a
Cesium-137		1.2	3,000	n/a
Cobalt-60		1.0	5,000	n/a
Tritium		-300	2,000,000	n/a
		Outfall 232		
Alpha activity	yes	2.5*	n/a	n/a
Beta activity		1.6	n/a	n/a
Cesium-137		-0.088	3,000	n/a
Cobalt-60		-0.23	5,000	n/a
Tritium		-460	2,000,000	n/a

Table 2.8 (continued)

Parameter	Result detected above MDA?	Concentration (pCi/L)(a)	Percent of DCG(b)	Percent of DCG(c)
		Outfall 241		
Alpha activity	yes	7.2*	n/a	n/a
Beta activity	yes	11*	n/a	n/a
Cesium-137		1.0	3,000	n/a
Cobalt-60		-2.3	5,000	n/a
Tritium		84	2,000,000	n/a
		Outfall 250		
Alpha activity		0.15	n/a	n/a
Beta activity		-2.5	n/a	n/a
Cesium-137	yes	5.9*	3,000	0.2
Cobalt-60		-0.43	5,000	n/a
Tritium		-470	2,000,000	n/a
		Outfall 265		
Alpha activity	yes	4.3*	n/a	n/a
Beta activity	yes	140*	n/a	n/a
Cesium-137	yes	5.1*	3,000	0.17
Cobalt-60		-0.43	5,000	n/a
Tritium		80	2,000,000	n/a
		Outfall 266		
Alpha activity		1.7	n/a	n/a
Beta activity		5.3*	n/a	n/a
Cesium-137		-0.039	3,000	n/a
Cobalt-60		0.97	5,000	n/a
Tritium		-170	2,000,000	n/a
		Outfall 267		
Alpha activity		0.99	n/a	n/a
Beta activity		3.2	n/a	n/a
Cesium-137		2.2*	3,000	n/a
Cobalt-60		0.9	5,000	n/a
Tritium		65	2,000,000	n/a

Table 2.8 (continued)

Parameter	Result detected above MDA?	Concentration (pCi/L)(a)	Percent of DCG(b)	Percent of DCG(c)
		Outfall 268		
Alpha activity		0.54	n/a	n/a
Beta activity	yes	8.7*	n/a	n/a
Cesium-137		1.8*	3,000	n/a
Cobalt-60		-0.84	5,000	n/a
Tritium		-54	2,000,000	n/a
		Outfall 282		
Alpha activity		0.81	n/a	n/a
Beta activity		0.1	n/a	n/a
Cesium-137		0.32	3,000	n/a
Cobalt-60		1.5	5,000	n/a
Tritium		0.0	2,000,000	n/a
		Outfall 313		
Alpha activity		2.2*	n/a	n/a
Beta activity		6.4*	n/a	n/a
Cesium-137		-0.87	3,000	n/a
Cobalt-60		1.7*	5,000	n/a
Tritium		110	2,000,000	n/a
		Outfall 341		
Alpha activity		2.3*	n/a	n/a
Beta activity	yes	42*	n/a	n/a
Cesium-137		0.71	3,000	n/a
Cobalt-60		1.3	5,000	n/a
Tritium		-110	2,000,000	n/a
		Outfall 342		
Alpha activity	yes	5.1*	n/a	n/a
Beta activity		1.5	n/a	n/a
Cesium-137		-1.0	3,000	n/a
Cobalt-60		0.39	5,000	n/a
Tritium		-290	2,000,000	n/a

Table 2.8 (continued)

Parameter	Result detected above MDA?	Concentration (pCi/L)(a)	Percent of DCG(b)	Percent of DCG(c)
		Outfall 362		
Alpha activity	yes	5.1*	n/a	n/a
Beta activity	yes	21*	n/a	n/a
Cesium-137		1.2	3,000	n/a
Cobalt-60		-0.43	5,000	n/a
Tritium		18	2,000,000	n/a
		Outfall 363		
Alpha activity	yes	2.6*	n/a	n/a
Beta activity	yes	15*	n/a	n/a
Cesium-137		-0.39	3,000	n/a
Cobalt-60		0.29	5,000	n/a
Tritium		-210	2,000,000	n/a
		Outfall 381		
Alpha activity		2.3*	n/a	n/a
Beta activity	yes	12*	n/a	n/a
Cesium-137		0.31	3,000	n/a
Cobalt-60	yes	14*	5,000	0.28
Tritium	yes	10,000*	2,000,000	0.5

(a) Individual radionuclide concentrations significantly greater than zero are identified by an *.
(b) Derived concentration guide for ingestion of water. From DOE Order 5400.5.
(c) The concentration as a percentage of the derived concentration guide (DCG), calculated only when a DCG exist and when the individual result is detected at or above MDA.

Table 2.9. 2004 radionuclide concentrations at ORNL NPDES permitted locations

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Av(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
Sewage Treatment Plant (X01)							
Alpha activity	0/12	-1.1	1.7*	0.18	0.29	n/a	n/a
Beta activity	12/12	220*	370*	280*	15	n/a	n/a
Strontium-89/90	12/12	97*	170*	130*	6.0	1,000	13
Coal Yard Runoff Treatment Facility (X02)							
Alpha activity	0/12	-32	14	-4.1	3.6	n/a	n/a
Beta activity	12/12	450*	760*	620*	27	n/a	n/a
Process Waste Treatment Complex (X12)							
Alpha activity	12/12	11*	170*	38*	12	n/a	n/a
Beta activity	12/12	530*	2,200*	1,100*	140	n/a	n/a
Cesium-134	5/5	4.1*	9.6*	6.2*	1.1	2,000	0.31
Cesium-137	12/12	310*	2,100*	880*	150	3,000	30
Cobalt-60	0/12	-1.2	3.0*	1.3*	0.34	5,000	n/a
Strontium-89/90	12/12	53*	180*	110*	11	1,000	11
Tritium	12/12	45,000*	150,000*	84,000*	11,000	2,000,000	4.2
Uranium - Alpha Activity	12/12	10*	160*	32*	12	500	6.3
Uranium-233/234	12/12	9.4*	140*	27*	10	500	5.4
Uranium-235	7/12	-0.0088	2.7*	0.37	0.22	600	0.062
Uranium-236	7/12	-0.016	1.5*	0.21	0.12	500	0.043
Uranium-238	12/12	0.83*	13*	3.8*	1.0	600	0.64
Melton Branch 1 (X13)							
Alpha activity	9/12	0.82	11*	4.6*	0.79	n/a	n/a
Beta activity	12/12	310*	1,800*	920*	170	n/a	n/a
Cesium-137	2/12	-2.2	12*	2.5*	1.1	3,000	0.083
Cobalt-60	1/12	-0.78	4.3*	1.3*	0.39	5,000	0.027
Strontium-89/90	12/12	150*	830*	410*	74	1,000	41
Tritium	12/12	210,000*	1,500,000*	660,000*	120,000	2,000,000	33
White Oak Creek (X14))							
Alpha activity	10/12	-0.49	10*	5.4*	0.77	n/a	n/a
Beta activity	12/12	91*	200*	120*	8.2	n/a	n/a
Cesium-137	12/12	16*	160*	45*	11	3,000	1.5
Cobalt-60	0/12	-0.61	1.2	0.079	0.16	5,000	n/a

Table 2.9 (continued)

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Av(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
Strontium-89/90	12/12	25*	49*	37*	2.1	1,000	3.7
Tritium	12/12	4,700*	18,000*	12,000*	1,200	2,000,000	0.6
White Oak Dam (X15)							
Alpha activity	11/12	0.71	12*	7.7*	0.93	n/a	n/a
Beta activity	12/12	210*	480*	340*	27	n/a	n/a
Cesium-137	12/12	21*	200*	72*	17	3,000	2.4
Cobalt-60	1/12	-1.4	3.8*	1.4*	0.42	5,000	0.028
Strontium-89/90	12/12	70*	160*	120*	7.4	1,000	12
Tritium	12/12	44,000*	160,000*	96,000*	8,700	2,000,000	4.8
Outfall 001							
Alpha activity	0/1	2.0	2.0	2.0	n/a	n/a	n/a
Beta activity	1/1	11*	11*	11	n/a	n/a	n/a
Outfall 081							
Alpha activity	0/1	-1.0	-1.0	-1.0	n/a	n/a	n/a
Beta activity	1/1	51*	51*	51	n/a	n/a	n/a
Outfall 085							
Alpha activity	4/4	3.9*	47*	28*	8.9	n/a	n/a
Beta activity	4/4	440*	1,500*	880*	220	n/a	n/a
Strontium-89/90	3/3	330*	740*	470*	130	1,000	47
Uranium - Alpha Activity	3/3	24*	44*	32*	6.0	500	6.5
Uranium-233/234	3/3	20*	37*	27*	5.1	500	5.4
Uranium-235	2/3	0.11*	0.37*	0.26*	0.078	600	0.043
Uranium-236	2/3	0.024	0.18*	0.095	0.046	500	0.019
Uranium-238	3/3	4.0*	6.3*	4.9*	0.7	600	0.82
Outfall 086							
Alpha activity	0/2	-1.2	-0.64	-0.92	0.28	n/a	n/a
Beta activity	1/2	7.9*	10*	9.0*	1.1	n/a	n/a
Tritium	2/2	83,000*	85,000*	84,000*	1,000	2,000,000	4.2

Table 2.9 (continued)

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Av(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
			Outfall 087				
Alpha activity	1/1	7.7*	7.7*	7.7	n/a	n/a	n/a
Beta activity	1/1	1,600*	1,600*	1,600	n/a	n/a	n/a
Cesium-137	1/1	1,300*	1,300*	1,300	n/a	3,000	43
Cobalt-60	0/1	1.6	1.6	1.6	n/a	5,000	n/a
			Outfall 203				
Alpha activity	1/1	2.0*	2.0*	2.0	n/a	n/a	n/a
Beta activity	1/1	26*	26*	26	n/a	n/a	n/a
			Outfall 204				
Alpha activity	2/4	0.69	13*	6.6	2.9	n/a	n/a
Beta activity	4/4	270*	450*	350*	42	n/a	n/a
Cesium-137	1/1	430*	430*	430	n/a	3,000	14
Cobalt-60	0/1	5.2	5.2	5.2	n/a	5,000	n/a
Strontium-89/90	4/4	22*	200*	88	42	1,000	8.8
			Outfall 205				
Alpha activity	0/1	-0.96	-0.96	-0.96	n/a	n/a	n/a
Beta activity	1/1	9.6*	9.6*	9.6	n/a	n/a	n/a
			Outfall 207				
Alpha activity	3/4	-1.0	8.3*	5.6*	2.2	n/a	n/a
Beta activity	4/4	23*	97*	58*	16	n/a	n/a
Cesium-137	0/4	-1.1	2.2*	0.77	0.69	3,000	n/a
Cobalt-60	0/4	-0.61	0.36	-0.15	0.22	5,000	n/a
Strontium-89/90	4/4	11*	38*	25*	6.0	1,000	2.5
			Outfall 211				
Alpha activity	0/4	-1.6	1.2	-0.042	0.58	n/a	n/a
Beta activity	0/4	-2.4	3.1	0.45	1.1	n/a	n/a
Strontium-89/90	1/4	-0.61	3.7*	0.98	0.94	1,000	0.098

Table 2.9 (continued)

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Av(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
			Outfall 217				
Alpha activity	1/1	4.4*	4.4*	4.4	n/a	n/a	n/a
Beta activity	0/1	6.3*	6.3*	6.3	n/a	n/a	n/a
			Outfall 219				
Alpha activity	0/1	-1.2	-1.2	-1.2	n/a	n/a	n/a
Beta activity	0/1	0.95	0.95	0.95	n/a	n/a	n/a
			Outfall 234				
Alpha activity	0/1	-0.69	-0.69	-0.69	n/a	n/a	n/a
Beta activity	0/1	3.2	3.2	3.2	n/a	n/a	n/a
			Outfall 265				
Alpha activity	0/1	-0.52	-0.52	-0.52	n/a	n/a	n/a
Beta activity	1/1	47*	47*	47	n/a	n/a	n/a
Cesium-137	0/1	1.8*	1.8*	1.8	n/a	3,000	n/a
Cobalt-60	0/1	-0.44	-0.44	-0.44	n/a	5,000	n/a
			Outfall 281				
Alpha activity	0/4	-6.5	0.58	-2.6	1.8	n/a	n/a
Beta activity	2/4	5.2*	27*	13*	5.0	n/a	n/a
Cesium-137	0/4	0.13	2.7*	1.1	0.58	3,000	n/a
Cobalt-60	0/4	-1.6	1.7	0.058	0.74	5,000	n/a
Tritium	4/4	2,700*	39,000*	12,000	8,900	2,000,000	0.61
			Outfall 282				
Alpha activity	0/4	-1.4	1.5	0.075	0.62	n/a	n/a
Beta activity	2/4	2.7	1,000*	250	250	n/a	n/a
Strontium-89/90	1/1	400*	400*	400	n/a	1,000	40
			Outfall 284				
Alpha activity	0/1	0.81	0.81	0.81	n/a	n/a	n/a
Beta activity	1/1	20*	20*	20	n/a	n/a	n/a

Table 2.9 (continued)

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Av(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
Outfall 290							
Cesium-137	0/1	1.3	1.3	1.3	n/a	3,000	n/a
Cobalt-60	0/1	-1.2	-1.2	-1.2	n/a	5,000	n/a
Outfall 302							
Alpha activity	6/12	1.2	12*	4.4*	0.95	n/a	n/a
Beta activity	12/12	120*	720*	320*	55	n/a	n/a
Cesium-137	11/12	2.8*	470*	110*	39	3,000	3.7
Cobalt-60	0/12	-0.18	1.4	0.64*	0.17	5,000	n/a
Strontium-89/90	12/12	39*	190*	110*	16	1,000	11
Tritium	12/12	2,300*	50,000*	15,000*	4,600	2,000,000	0.76
Uranium - Alpha Activity	1/1	8.1*	8.1*	8.1	n/a	500	1.6
Uranium-233/234	1/1	7.3*	7.3*	7.3	n/a	500	1.5
Uranium-235	0/1	-0.021	-0.021	-0.021	n/a	600	n/a
Uranium-236	0/1	0.0	0.0	0.0	n/a	500	n/a
Uranium-238	1/1	0.81*	0.81*	0.81	n/a	600	0.14
Outfall 304							
Alpha activity	9/12	-0.43	8.1*	4.8*	0.7	n/a	n/a
Beta activity	12/12	240*	600*	390*	32	n/a	n/a
Cesium-137	12/12	20*	110*	49*	9.0	3,000	1.6
Cobalt-60	0/12	-0.91	2.0*	0.8*	0.26	5,000	n/a
Strontium-89/90	12/12	100*	280*	170*	17	1,000	17
Tritium	5/12	-130	1,200*	510*	130	2,000,000	0.025
Outfall 365							
Alpha activity	1/4	0.82	5.3*	2.5*	0.99	n/a	n/a
Beta activity	4/4	27*	48*	41*	5.0	n/a	n/a
Strontium-89/90	1/1	21*	21*	21	n/a	1,000	2.1
Outfall 368							
Alpha activity	1/4	0.0	5.5*	2.5	1.3	n/a	n/a
Beta activity	2/4	-5.5	27*	9.5	6.8	n/a	n/a
Cesium-137	0/4	-1.7	3.1	0.36	1.0	3,000	n/a
Cobalt-60	0/4	-0.7	1.5	0.35	0.51	5,000	n/a

Table 2.9 (continued)

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Av(b)	Standard error(c)	DCG(d)	Percent of DCG(e)
Outfall 381							
Alpha activity	0/3	-0.72	1.4	0.59	0.66	n/a	n/a
Beta activity	3/3	53*	140*	84*	28	n/a	n/a
Cesium-137	0/3	0.31	0.97	0.6*	0.2	3,000	n/a
Cobalt-60	3/3	47*	130*	77*	26	5,000	1.6
Tritium	3/3	23,000*	35,000*	27,000*	4,000	2,000,000	1.4
Outfall 383							
Alpha activity	0/1	1.5	1.5	1.5	n/a	n/a	n/a
Beta activity	1/1	10*	10*	10	n/a	n/a	n/a
Tritium	1/1	5,500*	5,500*	5,500	n/a	2,000,000	0.28

(a) Individual radionuclide concentrations significantly greater than zero are identified by an *.
(b) Average radionuclide concentrations significantly greater than zero are identified by an *.
(c) Standard error of the mean.
(d) Derived concentration guide for ingestion of water. From DOE Order 5400.5.
(e) Average concentration as a percentage of the derived concentration guide (DCG), calculated only when a DCG exists and when at least one result is detected above MDA.

Table 2.10. 2004 analyses for ORNL reference surface waters

Parameter	N det/ N total	Concentration (pCi/L) Min(a)	Max(a)	Avg(b)	Standard error(c)	Ref. Value (d)	Percent of Ref. Value(e)
White Oak Creek Headwaters							
Field measurements							
Conductivity (mS/cm)	52/52	0.13	0.29	0.22	0.0056	n/a	n/a
Dissolved Oxygen (mg/L)	52/52	6.3	11	9.0	0.15	5	180
pH (Std Unit)	52/52	7.2	8.1	n/a	0.032	n/a	n/a
Temperature (deg C)	52/52	7.2	19	14	0.47	30.5	44
Turbidity (NTU)	52/52	1.0	250	17	5.0	n/a	n/a
Metals (mg/L)							
Antimony	2/12	<0.0005	0.0026	~0.00068	0.00017	n/a	n/a
Arsenic	1/12	<0.001	0.0057	~0.0019	0.00048	0.34	0.56
Cadmium	0/12	<0.0005	<0.0005	~0.0005	0.0	0.002	25
Chromium	5/12	<0.002	0.0064	~0.0029	0.00042	n/a	n/a
Copper	5/12	<0.001	0.0058	~0.0017	0.0004	0.013	13
Iron	10/12	<0.25	7.3	~1.3	0.58	n/a	n/a
Lead	12/12	0.00013	0.0085	0.0018	0.00073	0.065	2.8
Nickel	4/12	<0.001	<0.005	~0.0019	0.00044	0.47	0.39
Selenium	0/12	<0.002	<0.002	~0.002	0.0	0.02	10
Silver	0/12	<0.0002	<0.0002	~0.0002	0.0	0.0032	6.3
Zinc	12/12	0.013	0.05	0.032	0.0035	0.12	26

(a) Prefix "<" indicates the value of a parameter was not quantifiable at the analytical detection limit.
(b) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(c) Standard error of the mean.
(d) Tennessee General Water Quality Criteria for Fish and Aquatic Life is used as a reference value for White Oak Creek headwaters.
(e) Average concentration as a percentage of the reference value, calculated only when a reference exists , the parameter is a contaminant, and the parameter is detected.

Table 2.11. NPDES Permit Number TN0002941, 2004 ORNL outfall monitoring

Parameter	N det/ N total	Concentration Min(a)	Max(a)	Avg(b)	Standard error(c)
Category 1 outfalls					
Field measurements					
Flow (gpm)	18/18	0.1	30	6.2	2.1
pH (Std Unit)	18/18	7.3	8.2	n/a	n/a
Category 2 outfalls					
Field measurements					
Flow (gpm)	24/24	0.1	250	23	13
pH (Std Unit)	24/24	6.8	8.1	n/a	n/a
Category 3 outfalls					
Field measurements					
Flow (gpm)	54/54	0.1	55	9.8	1.7
pH (Std Unit)	54/54	7.1	8.1	n/a	n/a
Category 4 outfalls					
Field measurements					
Flow (gpm)	336/336	0.1	330	55	3.7
pH (Std Unit)	336/336	6.9	8.4	n/a	n/a
Temperature (deg C)	336/336	5.1	30	17	0.3
Cooling Tower Blowdown outfalls					
Field measurements					
Flow (gpm)	4/4	20	40	30	4.6
pH (Std Unit)	4/4	8.2	8.4	n/a	n/a
Temperature (deg C)	4/4	25	30	27	1.1
Total Residual Oxidant (mg/L)	0/4	<0.05	<0.05	~0.05	0.0
Physical					
Suspended Solids (mg/L)	4/4	1.2	5.6	3.4	1.1

Table 2.11 (continued)

Parameter	N det/ N total	Concentration Min(a)	Max(a)	Avg(b)	Standard error(c)
Cooling Tower Blowdown/Cooling Water outfalls					
Field measurements					
Flow (gpm)	48/48	10	100	41	2.8
pH (Std Unit)	48/48	6.9	8.2	n/a	n/a
Total Residual Oxidant (mg/L)	0/48	<0.05	<0.05	~0.05	0.0
Groundwater/Pumpwater outfalls					
Field measurements					
Flow (gpm)	4/4	0.1	0.1	0.1	0.0
pH (Std Unit)	4/4	7.3	8.0	n/a	n/a
Steam Condensate outfalls					
Field measurements					
Flow (gpm)	12/12	0.1	0.3	0.15	0.023
pH (Std Unit)	12/12	7.1	8.1	n/a	n/a
Temperature (deg C)	12/12	31	38	34	0.74

(a) Prefix "<" indicates the value for a parameter was not quantifiable at the analytical detection limit.
(b) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(c) Standard error of the mean.

Table 2.12. NPDES Permit Number TN0002941, 2004 ORNL Instream Chlorine monitoring

Parameter	N det/ N total	Concentration Min(a)	Max(a)	Avg(b)	Standard error(c)
First Creek					
Field measurements					
pH (Std Unit)	48/48	7.4	8.1	n/a	0.023
Temperature (deg C)	48/48	8.0	20	14	0.53
Total Residual Oxidant (mg/L)	0/48	<0.05	<0.05	~0.05	0.0
Fifth Creek					
Field measurements					
pH (Std Unit)	72/72	7.3	8.1	n/a	0.021
Temperature (deg C)	72/72	9.0	21	15	0.45
Total Residual Oxidant (mg/L)	0/72	<0.05	<0.05	~0.05	0.0
White Oak Creek					
Field measurements					
pH (Std Unit)	144/144	7.1	8.0	n/a	0.016
Temperature (deg C)	144/144	6.4	23	16	0.39
Total Residual Oxidant (mg/L)	0/144	<0.05	<0.05	~0.05	0.0

(a) Prefix "<" indicates the value for a parameter was not quantifiable at the analytical detection limit.
(b) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(c) Standard error of the mean.

Table 2.13. Surface water analyses (2004) at ORNL Environmental Monitoring Plan surface water locations (a)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
First Creek just upstream of Northwest Tributary (1STCK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	9.0	9.4	9.2	0.2	n/a
pH (Std Unit)	2/2	7.9	8.1	n/a	n/a	n/a
Temperature (deg C)	2/2	13	17	15	2.1	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	2/2	1.2*	6.7*	4.0	2.7	n/a
Beta activity	2/2	9.5*	72*	41	32	n/a
Strontium-89/90	2/2	4.8*	30*	17	12	40
Thorium-230	1/2	0.0	0.48*	0.24	0.24	12
Uranium-233/234	1/2	0.0	5.2*	2.6	2.6	20
Uranium-238	1/2	0.0	0.52*	0.26	0.26	24
Bear Creek downstream from Y-12 Complex inputs (BCK 0.6)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	8.3	8.6	8.5	0.15	5
pH (Std Unit)	2/2	7.8	8.2	n/a	n/a	n/a
Temperature (deg C)	2/2	14	15	15	0.85	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	2/2	4.2*	7.2*	5.7	1.5	n/a
Beta activity	2/2	4.2*	7.2*	5.7	1.5	n/a
Thorium-230	1/2	0.0	0.46*	0.23	0.23	12
Uranium-233/234	2/2	0.61*	3.2*	1.9	1.3	20
Uranium-235/236	1/2	0.0	0.55*	0.28	0.28	n/a
Uranium-238	2/2	2.8*	7.1*	4.9	2.1	24
Clinch River downstream from ORNL (CRK 32)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	6.1	11	8.2	0.44	n/a
pH (Std Unit)	12/12	7.6	8.5	n/a	n/a	n/a
Temperature (deg C)	12/12	6.9	21	16	1.5	30.5

Table 2.13 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Radionuclides (pCi/L) (f)						
Alpha activity	1/12	U-1.1	1.7*	~0.44*	0.2	n/a
Beta activity	9/12	U0.6	5.4*	~3.0*	0.49	n/a
Strontium-89/90	3/12	U-0.33	7.7*	~1.3*	0.63	40
Tritium	8/12	U-110	2,200*	~550*	180	80,000
Water supply intake for Knox County (CRK 58)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	5.5	13	9.3	0.55	n/a
pH (Std Unit)	12/12	6.9	8.8	n/a	n/a	n/a
Temperature (deg C)	12/12	6.3	25	17	1.7	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	1/12	U-1.7	2.3*	~0.4	0.31	n/a
Beta activity	3/12	U0.22	3.4*	~1.5*	0.26	n/a
Melton Hill Reservoir above city of Oak Ridge water intake (CRK 66)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	6.5	10	8.6	0.34	n/a
pH (Std Unit)	12/12	7.5	8.6	n/a	n/a	n/a
Temperature (deg C)	12/12	5.8	25	16	1.7	30.5
Radionuclides (pCi/L) (f)						
Beta activity	7/12	U-0.29	3.8*	~1.9*	0.4	n/a
Bismuth-214	1/12	0.0	12*	0.97	0.97	24,000
East Fork Poplar Creek prior to entering Poplar Creek (EFK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	5.4	7.4	6.4	1.0	5
pH (Std Unit)	2/2	7.8	8.1	n/a	n/a	n/a
Temperature (deg C)	2/2	14	18	16	2.2	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	1/2	U-0.19	4.0*	~1.9	2.1	n/a
Beta activity	1/2	U2.9*	5.7*	~4.3	1.4	n/a
Uranium-233/234	1/2	0.0	1.6*	0.82	0.82	20
Uranium-238	1/2	0.0	1.5*	0.74	0.74	24

Table 2.13 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
East Fork Poplar Creek downstream from floodplain (EFK 5.4)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	6.9	8.0	7.5	0.55	5
pH (Std Unit)	2/2	7.7	7.9	n/a	n/a	n/a
Temperature (deg C)	2/2	14	18	16	2.1	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	1/2	U0.69	1.6*	~1.2	0.47	n/a
Beta activity	2/2	2.8*	3.8*	3.3	0.53	n/a
Fifth Creek just upstream of White Oak Creek at ORNL (FIFTHCK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	8.9	9.4	9.2	0.25	n/a
pH (Std Unit)	2/2	6.7	8.1	n/a	n/a	n/a
Temperature (deg C)	2/2	14	18	16	1.8	n/a
Radionuclides (pCi/L) (f)						
Beta activity	2/2	24*	39*	32	7.7	n/a
Strontium-89/90	2/2	13*	20*	16	3.7	40
Tritium	2/2	180*	270*	230	44	80,000
Grassy Creek upstream of SEG and IT Corp (GCK 3.6)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	7.2	9.2	8.2	1.0	n/a
pH (Std Unit)	2/2	7.5	7.8	n/a	n/a	n/a
Temperature (deg C)	2/2	12	15	13	1.7	n/a
Metals (mg/L)						
Aluminum	2/2	E3.2	4.2	~3.7	0.52	n/a
Arsenic	1/2	<0.001	0.0047	~0.0029	0.0019	n/a
Barium	2/2	0.041	0.062	0.052	0.011	n/a
Beryllium	2/2	0.0001	0.00015	0.00013	0.000025	n/a
Boron	2/2	0.014	0.017	0.016	0.0015	n/a
Cadmium	2/2	0.00004	0.000047	0.000044	0.0000035	n/a
Calcium	2/2	8.0	34	21	13	n/a
Chromium	2/2	0.006	0.0071	0.0066	0.00055	n/a
Cobalt	2/2	0.002	0.0041	0.0031	0.0011	n/a
Copper	2/2	0.003	0.004	0.0035	0.0005	n/a

Table 2.13 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Iron	2/2	3.5	4.4	3.9	0.47	n/a
Lead	2/2	0.002	0.0066	0.0043	0.0023	n/a
Lithium	2/2	0.0043	0.005	0.0047	0.00035	n/a
Magnesium	2/2	E2.1	13	~7.5	5.4	n/a
Manganese	2/2	0.13	0.36	0.25	0.12	n/a
Molybdenum	1/2	<0.0002	0.00022	~0.00021	0.00001	n/a
Nickel	2/2	0.004	0.0053	0.0047	0.00065	n/a
Phosphorous	2/2	0.057	0.13	0.094	0.037	n/a
Potassium	2/2	1.9	2.1	2.0	0.075	n/a
Selenium	1/2	0.00097	<0.001	~0.00099	0.000015	n/a
Sodium	2/2	1.4	2.2	1.8	0.4	n/a
Strontium	2/2	0.023	0.045	0.034	0.011	n/a
Sulfur	2/2	0.93	2.4	1.7	0.76	n/a
Thallium	2/2	0.00006	0.00018	0.00012	0.00006	n/a
Titanium	2/2	0.047	0.076	0.062	0.015	n/a
Uranium	2/2	0.0002	0.00041	0.00031	0.00011	n/a
Vanadium	1/2	<0.005	0.008	~0.0065	0.0015	n/a
Zinc	2/2	0.015	0.02	0.018	0.0025	n/a
Zirconium	2/2	0.00082	0.002	0.0014	0.00059	n/a
Radionuclides (pCi/L) (f)						
Beta activity	1/2	U1.6*	3.7*	~2.6	1.1	n/a
Ish Creek prior to entering CRK 30.8 (ICK 0.7)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	8.9	9.0	9.0	0.05	n/a
pH (Std Unit)	2/2	7.8	8.1	n/a	n/a	n/a
Temperature (deg C)	2/2	12	15	13	1.6	n/a
Radionuclides (pCi/L) (f)						
Lead-212	1/2	0.0	3.9*	2.0	2.0	120
McCoy Branch prior to entering CRK 60.3 (McCBK 1.8)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	6.4	9.1	7.8	1.4	n/a
pH (Std Unit)	2/2	7.7	7.8	n/a	n/a	n/a
Temperature (deg C)	2/2	11	22	16	5.5	n/a

Table 2.13 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Radionuclides (pCi/L) (f)						
Alpha activity	1/2	U-0.27	1.6*	~0.65	0.92	n/a
Beta activity	1/2	U2.3*	5.1*	~3.7	1.4	n/a
Melton Branch downstream from ORNL (MEK 0.2)						
Field measurements						
Dissolved Oxygen (ppm)	6/6	6.8	13	9.2	1.1	5
pH (Std Unit)	6/6	7.6	8.4	n/a	n/a	n/a
Temperature (deg C)	6/6	3.2	24	15	3.4	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	5/6	U0.81	20*	~9.0*	3.4	n/a
Beta activity	6/6	470*	2,500*	1,300*	400	n/a
Bismuth-214	1/6	0.0	14*	2.3	2.3	24,000
Lead-214	1/6	0.0	11*	1.8	1.8	n/a
Plutonium-238	2/6	0.0	4.1*	0.83	0.68	1.6
Potassium-40	1/6	U5.9	U36*	~19*	4.7	280
Strontium-89/90	6/6	230*	1,100*	570*	160	40
Thorium-230	3/6	0.0	0.93*	0.35*	0.17	12
Thorium-232	1/6	0.0	0.21*	0.035	0.035	2
Tritium	6/6	200,000*	2,000,000*	950,000*	330,000	80,000
Uranium-233/234	3/6	0.0	1.6*	0.66*	0.32	20
Uranium-235/236	1/6	0.0	0.43*	0.072	0.072	n/a
Uranium-238	4/6	0.0	2.0*	0.93*	0.35	24
Northwest Tributary prior to entering 1st Creek at ORNL (NWTK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	7.7	9.3	8.5	0.8	n/a
pH (Std Unit)	2/2	8.0	8.0	n/a	n/a	n/a
Temperature (deg C)	2/2	13	16	14	1.9	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	1/2	U0.45	2.4*	~1.4	0.99	n/a
Beta activity	2/2	64*	170*	120	54	n/a
Strontium-89/90	2/2	30*	77*	54	23	40
Tritium	1/2	U130*	210*	~170	39	80,000

Table 2.13 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Raccoon Creek sampling station prior to entering CRK 31 (RCK 2.0)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	7.0	7.7	7.4	0.35	n/a
pH (Std Unit)	2/2	7.6	8.2	n/a	n/a	n/a
Temperature (deg C)	2/2	12	14	13	1.1	n/a
Radionuclides (pCi/L) (f)						
Beta activity	2/2	9.2*	29*	19	9.7	n/a
Potassium-40	1/2	U0.17	29	~15	15	280
Strontium-89/90	2/2	15*	16*	15*	0.25	40
Tritium	1/2	U39	210*	~120	83	80,000
Walker Branch prior to entering CRK 53.4 (WBK 0.1)						
Field measurements						
Dissolved Oxygen (ppm)	2/2	6.0	9.1	7.6	1.6	n/a
pH (Std Unit)	2/2	7.4	7.8	n/a	n/a	n/a
Temperature (deg C)	2/2	13	19	16	3.0	n/a
Radionuclides (pCi/L) (f)						
Beta activity	1/2	U1.0	3.4*	~2.2	1.2	n/a
White Oak Lake at White Oak Dam (WCK 1.0)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	5.2	12	7.8	0.57	5
pH (Std Unit)	12/12	6.9	8.7	n/a	n/a	n/a
Temperature (deg C)	12/12	4.1	28	17	2.3	30.5
Metals (mg/L)						
Aluminum	12/12	E0.24	3.1	~1.2	0.25	n/a
Antimony	1/12	<0.0001	<0.0003	~0.00027	0.000017	n/a
Arsenic	8/12	<0.001	0.004	~0.0017	0.00027	0.34
Barium	12/12	0.032	0.064	0.047	0.0029	n/a
Beryllium	3/12	<0.00003	0.0001	~0.00008	0.0000073	n/a
Boron	12/12	0.016	E0.031	~0.025	0.0015	n/a
Cadmium	10/12	0.00002	0.0001	0.000062	0.0000083	0.002
Calcium	12/12	25	54	41	2.2	n/a
Chromium	12/12	0.0027	0.016	0.0058	0.0011	n/a
Cobalt	12/12	0.0003	0.0011	0.0007	0.000084	n/a
Copper	12/12	0.002	0.006	0.0036	0.00036	0.013

Table 2.13 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Iron	12/12	0.55	2.6	1.4	0.19	n/a
Lead	12/12	0.0005	0.0025	0.0016	0.00018	0.065
Lithium	12/12	0.0026	0.0043	0.0032	0.00016	n/a
Magnesium	12/12	4.8	13	8.8	0.63	n/a
Manganese	12/12	0.062	0.2	0.13	0.015	n/a
Mercury	4/12	<0.00003	0.0001	~0.000059	0.0000063	0.0014
Molybdenum	12/12	0.00096	0.011	0.0054	0.00081	n/a
Nickel	12/12	0.001	0.0038	0.0022	0.00021	0.47
Phosphorous	12/12	0.066	0.34	0.18	0.024	n/a
Potassium	12/12	1.5	6.9	3.3	0.45	n/a
Selenium	5/12	<0.0006	0.0032	~0.0016	0.00026	0.02
Silver	10/12	<0.00004	0.00061	~0.00016	0.000047	0.0032
Sodium	12/12	3.8	27	17	2.1	n/a
Strontium	12/12	0.053	0.13	0.098	0.0066	n/a
Sulfur	12/12	4.5	25	14	1.9	n/a
Thallium	12/12	0.000051	0.00034	0.00012	0.000023	n/a
Titanium	12/12	0.0038	0.034	0.017	0.0026	n/a
Uranium	12/12	0.0026	0.0043	0.0035	0.00017	n/a
Vanadium	1/12	<0.001	0.007	~0.0049	0.00044	n/a
Zinc	12/12	0.012	0.043	0.022	0.0025	0.12
Zirconium	12/12	0.0004	0.003	0.0013	0.00026	n/a
Radionuclides (pCi/L) (f)						
Alpha activity	11/12	U1.3	22*	~6.9*	1.5	n/a
Beta activity	12/12	96*	530*	300*	38	n/a
Cesium-137	12/12	14*	120*	51*	9.8	120
Plutonium-239/240	5/12	0.0	0.64*	0.14*	0.061	1.2
Potassium-40	1/12	U6.2	U43*	~20*	2.8	280
Strontium-89/90	12/12	57*	190*	130*	12	40
Thorium-230	7/12	0.0	1.9*	0.43*	0.16	12
Thorium-232	2/12	0.0	0.28*	0.03	0.024	2
Tritium	12/12	21,000*	200,000*	100,000*	15,000	80,000
Uranium-233/234	11/12	0.0	11*	3.6*	0.79	20
Uranium-235/236	4/12	0.0	0.47*	0.12*	0.054	n/a
Uranium-238	10/12	0.0	2.1*	1.1*	0.19	24
Volatile organics (µg/L)						
2-Butanone	1/12	U5.0	14	~5.7	0.73	n/a
Acetone	1/12	U5.0	9.3	~5.4	0.36	n/a
Chloroform	10/12	J0.37	1.1	~0.71	0.074	n/a
Toluene	2/12	JB0.44	U1.0	~0.93	0.052	n/a

Table 2.13 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
White Oak Creek downstream from ORNL (WCK 2.6)						
Field measurements						
Dissolved Oxygen (ppm)	6/6	6.8	10	8.6	0.55	5
pH (Std Unit)	6/6	7.3	8.4	n/a	n/a	n/a
Temperature (deg C)	6/6	7.9	24	17	2.5	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	6/6	2.5*	8.8*	6.2*	1.1	n/a
Beta activity	6/6	65*	180*	120*	17	n/a
Bismuth-214	1/6	0.0	6.7*	1.1	1.1	24,000
Cesium-137	5/6	0.0	83*	32*	12	120
Potassium-40	1/6	U0.0	49*	~22*	7.8	280
Strontium-89/90	6/6	30*	59*	42*	5.5	40
Thorium-230	2/6	0.0	0.7*	0.2	0.13	12
Tritium	6/6	4,600*	46,000*	26,000*	6,900	80,000
Uranium-233/234	5/6	0.0	3.9*	1.9*	0.53	20
Uranium-235/236	1/6	0.0	0.32*	0.053	0.053	n/a
Uranium-238	5/6	0.0	1.1*	0.76*	0.17	24
White Oak Creek upstream from ORNL (WCK 6.8)						
Field measurements						
Dissolved Oxygen (ppm)	3/3	8.2	11	9.0	0.74	5
pH (Std Unit)	3/3	6.8	7.8	n/a	n/a	n/a
Temperature (deg C)	3/3	8.7	17	14	2.5	30.5

Table 2.13 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Radionuclides (pCi/L) (f)						
Alpha activity	1/3	U0.035	U1.7*	~0.92	0.49	n/a
Beta activity	1/3	U0.37	12*	~4.5	3.9	n/a
Cesium-137	1/3	0.0	2.6*	0.86	0.86	120
Lead-212	1/3	0.0	7.3*	2.4	2.4	120

(a) All values were included in the calculations. Only parameters that have detections in one or more samples are listed in the table. The sampling and analysis plan contains a complete list of analyses performed.
(b) Prefix "J" indicates the value was estimated at or below the analytical detection limit by the laboratory; "U" indicates that the value was undetected at the analytical detection limit or MDA; "JB" indicates that the value was estimated at or below the analytical detection limit and the analyte was detected in the associated lab blank; "E" indicates that the percent difference between the parent sample and its serial dilution's concentration exceeds 10%; and "<" indicates the value for a parameter was not quantifiable at the analytical detection limit.
(c) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(d) Standard error of the mean.
(e) Tennessee General Water Quality Criteria for Recreation and Domestic Use, as amended (CRK 32, CRK 58, CRK 66) or Tennessee General Water Quality Criteria for Freshwater Fish and Aquatic Life, as amended (BCK 0.6, EFK 0.1, EFK 5.4, MEK 0.2, WCK 1.0, WCK 2.6, WCK 6.8). 4% of DOE DCG used for radionuclides, where applicable.
(f) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected above MDA.

Table 3.1. 2004 tissue concentrations in Sunfish(a)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)
Clinch River downstream from all DOE ORR inputs (CRK 16)					
Metals (mg/kg)					
Aluminum	2/2	2.7	3.3	3.0	0.3
Antimony	2/2	0.067	0.13	0.099	0.032
Arsenic	2/2	0.16	0.17	0.17	0.005
Barium	2/2	0.24	0.32	0.28	0.04
Beryllium	2/2	0.0024	0.0026	0.0025	0.0001
Boron	1/2	<0.22	0.22	~0.22	0.0
Cadmium	2/2	0.004	0.006	0.005	0.001
Calcium	2/2	2,700	3,400	3,100	350
Chromium	2/2	0.1	0.11	0.11	0.005
Cobalt	2/2	0.015	0.016	0.016	0.0005
Copper	2/2	0.22	0.26	0.24	0.02
Iron	2/2	4.8	5.6	5.2	0.4
Lead	1/2	<0.028	0.057	~0.043	0.015
Lithium	2/2	0.021	0.021	0.021	0.0
Magnesium	2/2	270	280	280	5.0
Manganese	2/2	2.0	2.4	2.2	0.2
Mercury	2/2	0.11	0.11	0.11	0.0
Phosphorous	2/2	3,200	3,500	3,400	150
Potassium	2/2	3,400	3,600	3,500	100
Selenium	2/2	0.71	0.77	0.74	0.03
Silicon	2/2	3.5	4.0	3.8	0.25
Silver	2/2	0.016	0.019	0.018	0.0015
Sodium	2/2	530	560	550	15
Strontium	2/2	2.1	2.7	2.4	0.3
Thallium	1/2	<0.0033	0.0034	~0.0034	0.00005
Uranium	2/2	0.00082	0.001	0.00091	0.00009
Vanadium	2/2	0.024	0.031	0.028	0.0035
Zinc	2/2	13	14	14	0.5
Pesticides and PCBs (µg/kg)					
Endrin	2/2	J0.52	J0.72	~0.62	0.1
PCB-1260	2/2	34	45	40	5.5
Radionuclides (pCi/g) (e)					
Alpha activity	1/2	0.014	0.076*	0.045	0.031
Beta activity	2/2	2.3*	2.3*	2.3*	0.03
Potassium-40	2/2	1.8*	2.4*	2.1*	0.31

Table 3.1 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)
		Clinch River downstream from ORNL (CRK 32)			
Metals (mg/kg)					
Aluminum	2/2	4.0	4.4	4.2	0.2
Antimony	2/2	0.1	0.12	0.11	0.01
Arsenic	2/2	0.13	0.14	0.14	0.005
Barium	2/2	0.16	0.18	0.17	0.01
Beryllium	2/2	0.0016	0.0016	0.0016	0.0
Boron	2/2	0.27	0.29	0.28	0.01
Cadmium	2/2	0.0046	0.0046	0.0046	0.0
Calcium	2/2	1,400	1,700	1,600	150
Chromium	2/2	0.089	0.09	0.09	0.0005
Cobalt	2/2	0.013	0.017	0.015	0.002
Copper	2/2	0.23	0.25	0.24	0.01
Iron	2/2	6.2	6.8	6.5	0.3
Lead	2/2	0.051	0.056	0.054	0.0025
Lithium	2/2	0.019	0.021	0.02	0.001
Magnesium	2/2	270	280	280	5.0
Manganese	2/2	1.1	1.3	1.2	0.1
Mercury	2/2	0.031	0.032	0.032	0.0005
Phosphorous	2/2	2,600	2,800	2,700	100
Potassium	2/2	3,800	3,800	3,800	0.0
Selenium	2/2	0.87	0.89	0.88	0.01
Silicon	2/2	5.1	5.4	5.3	0.15
Silver	2/2	0.015	0.016	0.016	0.0005
Sodium	2/2	530	530	530	0.0
Strontium	2/2	1.1	1.3	1.2	0.1
Thallium	2/2	0.0042	0.0045	0.0044	0.00015
Uranium	2/2	0.00067	0.00073	0.0007	0.00003
Vanadium	2/2	0.014	0.017	0.016	0.0015
Zinc	2/2	12	13	13	0.5
Pesticides and PCBs (µg/kg)					
Endrin	2/2	J0.88	J1.2	~1.0	0.16
PCB-1016	2/2	J9.1	J10	~9.6	0.45
PCB-1260	2/2	40	45	43	2.5
Radionuclides (pCi/g) (e)					
Alpha activity	1/2	0.014	0.1*	0.058	0.044
Beta activity	2/2	2.5*	2.7*	2.6*	0.1
Cesium-137	1/1	0.11*	0.11*	n/a	n/a
Potassium-40	2/2	2.3*	3.2*	2.7	0.46

Table 3.1 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)
Strontium-90	1/2	0.04	0.12*	0.078	0.038
Tritium	2/2	1.2*	1.5*	1.4*	0.16
Clinch River (Solway Bridge) upstream from all DOE ORR inputs (CRK 70)					
Metals (mg/kg)					
Aluminum	2/2	2.5	3.4	3.0	0.45
Antimony	2/2	0.085	0.087	0.086	0.001
Arsenic	2/2	0.15	0.17	0.16	0.01
Barium	2/2	0.2	0.22	0.21	0.01
Beryllium	2/2	0.0018	0.0022	0.002	0.0002
Boron	2/2	0.25	0.31	0.28	0.03
Calcium	2/2	1,200	1,500	1,400	150
Chromium	2/2	0.086	0.088	0.087	0.001
Copper	2/2	0.28	0.28	0.28	0.0
Iron	2/2	4.8	5.5	5.2	0.35
Lead	1/2	<0.028	0.059	~0.044	0.016
Lithium	1/2	<0.014	0.029	~0.022	0.0075
Magnesium	2/2	260	270	270	5.0
Manganese	2/2	0.95	1.0	0.98	0.025
Mercury	2/2	0.019	0.023	0.021	0.002
Phosphorous	2/2	2,400	2,500	2,500	50
Potassium	2/2	3,200	3,600	3,400	200
Selenium	2/2	1.0	1.1	1.1	0.05
Silicon	2/2	3.6	4.0	3.8	0.2
Silver	2/2	0.015	0.017	0.016	0.001
Sodium	2/2	430	460	450	15
Strontium	2/2	1.1	1.3	1.2	0.1
Thallium	1/2	<0.0033	0.0034	~0.0034	0.00005
Uranium	2/2	0.0011	0.0012	0.0012	0.00005
Vanadium	2/2	0.014	0.022	0.018	0.004
Zinc	2/2	13	13	13	0.0
Pesticides and PCBs (µg/kg)					
Endrin	2/2	J0.1	J0.3	~0.2	0.1
PCB-1260	2/2	22	30	26	4.0

Table 3.1 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)
Radionuclides (pCi/g) (e)					
Alpha activity	2/2	0.056*	0.18*	0.12	0.061
Beta activity	2/2	1.9*	2.5*	2.2*	0.28
Potassium-40	2/2	2.5*	3.1*	2.8*	0.28

(a) All values were included in the calculations. Only parameters that have detections in one or more samples are listed in the table. The sampling and analysis plan contains a complete list of analyses performed.
(b) Prefix "J" indicates the value was estimated at or below the analytical detection limit by the laboratory and "<" indicates the value for a parameter was not quantifiable at the analytical detection limit.
(c) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(d) Standard error of the mean.
(e) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected above MDA.

Table 3.2. 2004 tissue concentrations in Catfish(a)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)
Clinch River downstream from all DOE ORR inputs (CRK 16)					
Metals (mg/kg)					
Antimony	1/2	<0.064	0.096	~0.08	0.016
Arsenic	2/2	0.17	0.17	0.17	0.0
Barium	2/2	0.012	0.018	0.015	0.003
Boron	2/2	0.044	0.047	0.046	0.0015
Calcium	2/2	71	75	73	2.0
Chromium	1/2	<0.059	0.062	~0.061	0.0015
Cobalt	2/2	0.013	0.023	0.018	0.005
Copper	2/2	0.4	0.42	0.41	0.01
Iron	2/2	3.0	3.8	3.4	0.4
Lead	2/2	0.033	0.043	0.038	0.005
Magnesium	2/2	210	230	220	10
Manganese	2/2	0.094	0.11	0.1	0.008
Mercury	2/2	0.3	0.32	0.31	0.01
Nickel	1/2	<0.035	0.045	~0.04	0.005
Phosphorous	2/2	1,700	1,800	1,800	50
Potassium	2/2	2,600	2,700	2,700	50
Selenium	2/2	0.53	0.56	0.55	0.015
Silicon	2/2	0.97	1.0	0.99	0.015
Silver	1/2	<0.01	0.016	~0.013	0.003
Sodium	2/2	390	410	400	10
Strontium	2/2	0.047	0.052	0.05	0.0025
Thallium	2/2	0.0032	0.004	0.0036	0.0004
Uranium	2/2	0.00049	0.00052	0.00051	0.000015
Zinc	2/2	8.4	11	9.7	1.3
Pesticides and PCBs (µg/kg)					
4,4'-DDE	2/2	23	38	31	7.5
alpha-Chlordane	2/2	5.4	10	7.7	2.3
gamma-Chlordane	2/2	2.9	5.7	4.3	1.4
PCB-1260	2/2	580	870	730	150
Radionuclides (pCi/g) (e)					
Alpha activity	1/2	0.0096*	0.02*	0.015	0.0053
Beta activity	2/2	1.3*	2.1*	1.7	0.37
Potassium-40	2/2	3.8*	4.1*	4.0*	0.17
Clinch River downstream from ORNL (CRK 32)					
Metals (mg/kg)					
Arsenic	2/2	0.18	0.2	0.19	0.01
Barium	2/2	0.036	0.04	0.038	0.002
Boron	1/2	<0.035	0.038	~0.037	0.0015
Calcium	2/2	75	100	88	13

Table 3.2 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)
Copper	2/2	0.36	0.37	0.37	0.005
Iron	2/2	3.3	3.8	3.6	0.25
Lead	1/2	<0.022	0.044	~0.033	0.011
Magnesium	2/2	220	240	230	10
Manganese	2/2	0.18	0.2	0.19	0.01
Mercury	2/2	0.095	0.1	0.098	0.0025
Molybdenum	1/2	<0.032	0.037	~0.035	0.0025
Phosphorous	2/2	1,800	1,900	1,900	50
Potassium	2/2	2,800	2,900	2,900	50
Selenium	2/2	0.52	0.6	0.56	0.04
Silicon	2/2	1.2	1.4	1.3	0.1
Silver	1/2	<0.01	0.012	~0.011	0.001
Sodium	2/2	370	370	370	0.0
Strontium	2/2	0.046	0.062	0.054	0.008
Thallium	2/2	0.0043	0.0044	0.0044	0.00005
Uranium	2/2	0.00056	0.00062	0.00059	0.00003
Zinc	2/2	7.9	8.1	8.0	0.1
Pesticides and PCBs (µg/kg)					
4,4'-DDE	2/2	25	27	26	1.0
alpha-Chlordane	2/2	9.9	11	11	0.55
gamma-Chlordane	2/2	4.6	4.7	4.7	0.05
PCB-1260	2/2	430	460	450	15
Radionuclides (pCi/g) (e)					
Beta activity	2/2	2.1*	2.9*	2.5*	0.37
Potassium-40	2/2	4.0*	4.6*	4.3*	0.3
Clinch River (Solway Bridge) upstream from all DOE ORR inputs (CRK 70)					
Metals (mg/kg)					
Aluminum	1/2	<0.15	0.16	~0.16	0.005
Antimony	1/2	<0.064	0.096	~0.08	0.016
Arsenic	2/2	0.17	0.22	0.2	0.025
Barium	2/2	0.029	0.038	0.034	0.0045
Boron	2/2	0.051	0.058	0.055	0.0035
Calcium	2/2	83	190	140	54
Chromium	2/2	0.059	0.23	0.15	0.086
Cobalt	1/2	<0.011	0.019	~0.015	0.004
Copper	2/2	0.28	0.32	0.3	0.02
Iron	2/2	3.7	3.7	3.7	0.0
Lead	1/2	<0.022	0.031	~0.027	0.0045
Magnesium	2/2	210	210	210	0.0
Manganese	2/2	0.17	0.25	0.21	0.04
Mercury	2/2	0.029	0.036	0.033	0.0035

Table 3.2 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)
Molybdenum	1/2	<0.032	0.036	~0.034	0.002
Nickel	1/2	<0.035	0.1	~0.068	0.033
Phosphorous	2/2	1,800	1,800	1,800	0.0
Potassium	2/2	2,600	2,800	2,700	100
Selenium	2/2	0.57	0.63	0.6	0.03
Silicon	2/2	1.5	1.5	1.5	0.0
Sodium	2/2	350	350	350	0.0
Strontium	2/2	0.059	0.13	0.095	0.036
Thallium	2/2	0.0036	0.0037	0.0037	0.00005
Uranium	2/2	0.00077	0.00079	0.00078	0.00001
Zinc	2/2	6.8	7.1	7.0	0.15
Pesticides and PCBs (µg/kg)					
4,4'-DDE	2/2	13	15	14	1.0
alpha-Chlordane	2/2	8.0	8.2	8.1	0.1
gamma-Chlordane	2/2	5.7	5.8	5.8	0.05
PCB-1260	2/2	390	460	430	35
Radionuclides (pCi/g) (e)					
Beta activity	2/2	1.7*	2.1*	1.9*	0.2
Potassium-40	2/2	3.7*	4.2*	4.0*	0.21

(a) All values were included in the calculations. Only parameters that have detections in one or more samples are listed in the table. The sampling and analysis plan contains a complete list of analyses performed.
(b) Prefix "<" indicates the value for a parameter was not quantifiable at the analytical detection limit.
(c) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(d) Standard error of the mean.
(e) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected above MDA.

Table 3.3. Concentration of radionuclides detected in raw milk, 2004

Analysis	No. detected/ no. total	Detected concentration (pCi/L)[a,b]			Standard error of mean
		Min	Max	Avg	
Claxton					
Potassium-40	6/6	1100*	1400*	1300*	41
Tritium	1/6	72	860*	560*	140
Maryville					
Potassium-40	6/6	1200*	1500*	1300*	37
Tritium	2/6	100	1200*	650*	160
Powell					
Potassium-40	6/6	1100*	1300*	1200*	22
Total rad Sr	2/6	-0.6	1.8*	1.1*	0.37
Tritium	2/6	270*	1100*	600*	130

[a]1 pCi = 3.7×10^{-2} Bq. Detected radionuclides are those detected above minimum detectable activity.
[b]Individual and average concentrations significantly greater than zero at the 95% confidence level are identified by an asterisk (*).

Table 3.4. Surface water analyses (2004) at ORR Environmental Monitoring Plan surface water locations (a)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
			Clinch River downstream from all DOE ORR inputs (CRK 16)			
Field measurements						
Dissolved Oxygen (ppm)	12/12	6.0	9.9	8.0	0.36	n/a
pH (Std Unit)	12/12	7.7	8.6	n/a	n/a	n/a
Temperature (deg C)	12/12	7.1	23	16	1.6	30.5
Metals (mg/L)						
Aluminum	11/11	0.062	6.0	1.0	0.51	n/a
Antimony	2/11	<0.0001	0.00036	~0.00026	0.000025	0.014
Arsenic	5/11	<0.001	0.0035	~0.0015	0.00023	0.05
Barium	11/11	0.03	0.056	0.037	0.0023	n/a
Beryllium	3/11	0.00005	0.00019	0.000092	0.000011	n/a
Boron	11/11	0.013	E0.019	~0.016	0.00054	n/a
Cadmium	4/11	0.00003	0.00011	0.000046	0.0000065	n/a
Calcium	11/11	17	37	33	1.8	n/a
Chromium	9/11	<0.00038	0.0062	~0.002	0.0005	n/a
Cobalt	11/11	0.0002	0.0025	0.00062	0.00021	n/a
Copper	11/11	0.001	0.0044	0.002	0.00032	n/a
Iron	11/11	0.23	5.5	1.1	0.46	n/a
Lead	11/11	0.0001	0.0036	0.00092	0.00029	n/a
Lithium	11/11	0.002	0.007	0.0035	0.00046	n/a
Magnesium	11/11	5.9	11	9.5	0.43	n/a
Manganese	11/11	0.034	0.3	0.078	0.023	n/a
Molybdenum	11/11	0.0002	0.001	0.00055	0.000077	n/a
Nickel	11/11	0.001	0.0052	0.0017	0.00037	0.61
Phosphorous	11/11	0.017	0.16	0.046	0.012	n/a
Potassium	11/11	1.5	3.2	1.9	0.15	n/a
Selenium	5/11	<0.0006	0.003	~0.0017	0.00028	n/a
Silver	2/11	0.00001	<0.00004	~0.000036	0.0000031	n/a
Sodium	11/11	2.0	6.1	4.8	0.39	n/a
Strontium	11/11	0.044	0.11	0.087	0.006	n/a
Sulfur	11/11	2.8	8.1	6.0	0.46	n/a
Thallium	11/11	0.00003	0.0005	0.00021	0.000057	0.0017
Titanium	11/11	0.001	0.063	0.016	0.0056	n/a
Uranium	11/11	0.0001	0.001	0.00032	0.00007	n/a
Zinc	11/11	0.0047	0.056	0.015	0.0046	n/a
Zirconium	6/11	<0.0002	E0.003	~0.0011	0.00033	n/a

Table 3.4 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Radionuclides (pCi/L) (f)						
Alpha activity	1/12	U-0.28	3.0*	~0.66*	0.23	n/a
Beta activity	5/12	U0.3	4.3*	~2.3*	0.44	n/a
Bismuth-214	2/12	0.0	15*	1.6	1.3	24,000
Volatile organics (µg/L)						
2-Butanone	1/12	J2.6	U5.0	~4.8	0.2	n/a
Acetone	1/12	J3.1	U5.0	~4.8	0.16	n/a
Toluene	2/12	JB0.4	U1.0	~0.93	0.054	6,800
Water supply intake for the ETTP (CRK 23)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	5.9	11	8.6	0.54	n/a
pH (Std Unit)	12/12	7.5	8.6	n/a	n/a	n/a
Temperature (deg C)	12/12	7.2	22	16	1.5	30.5
Radionuclides (pCi/L) (f)						
Alpha activity	2/12	U-0.42	4.0*	~0.86*	0.33	n/a
Beta activity	10/12	U0.11	38*	~5.6*	2.9	n/a
Bismuth-214	1/12	0.0	5.1*	0.42	0.42	24,000
Strontium-89/90	4/12	U-0.49	3.0*	~0.68*	0.27	40
Tritium	7/12	U-320	3,600*	~540*	300	80,000
Clinch River (Solway Bridge) upstream from all DOE ORR inputs (CRK 70)						
Field measurements						
Dissolved Oxygen (ppm)	12/12	6.5	14	8.6	0.6	n/a
pH (Std Unit)	12/12	7.0	8.4	n/a	n/a	n/a
Temperature (deg C)	12/12	5.4	24	16	1.7	30.5
Metals (mg/L)						
Aluminum	12/12	0.11	2.5	0.46	0.19	n/a
Antimony	2/12	<0.0001	0.0003	~0.00027	0.000017	0.014
Arsenic	9/12	<0.001	0.003	~0.0018	0.00019	0.05
Barium	12/12	0.027	0.037	0.034	0.00097	n/a
Beryllium	1/12	<0.00002	0.0001	~0.000078	0.0000076	n/a
Boron	12/12	0.013	0.026	0.018	0.0012	n/a
Cadmium	2/12	<0.00002	0.0001	~0.000042	0.0000058	n/a
Calcium	12/12	31	40	35	0.85	n/a
Chromium	9/12	<0.00038	0.0056	~0.0017	0.00046	n/a
Cobalt	12/12	0.0002	0.001	0.00035	0.000063	n/a
Copper	12/12	0.001	0.0033	0.002	0.0002	n/a

Table 3.4 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Iron	12/12	0.24	2.0	0.55	0.14	n/a
Lead	12/12	0.000084	0.001	0.00056	0.000082	n/a
Lithium	12/12	0.003	0.0061	0.0037	0.00027	n/a
Magnesium	12/12	7.1	11	9.9	0.39	n/a
Manganese	12/12	0.03	0.11	0.065	0.0064	n/a
Mercury	1/12	<0.00003	0.002	~0.00022	0.00016	0.00005
Molybdenum	12/12	0.0003	0.0025	0.00088	0.00019	n/a
Nickel	12/12	0.001	0.002	0.0014	0.0001	0.61
Phosphorous	12/12	0.015	0.075	0.026	0.005	n/a
Potassium	12/12	1.5	2.5	1.7	0.086	n/a
Selenium	7/12	<0.00064	0.0041	~0.0018	0.00034	n/a
Silver	1/12	0.000005	<0.00004	~0.000035	0.0000037	n/a
Sodium	12/12	3.9	7.4	5.7	0.32	n/a
Strontium	12/12	0.076	0.12	0.1	0.0037	n/a
Sulfur	12/12	5.2	9.4	7.2	0.33	n/a
Thallium	12/12	0.000044	0.00049	0.00024	0.000043	0.0017
Titanium	12/12	0.002	0.036	0.0071	0.0027	n/a
Uranium	12/12	0.00003	0.0003	0.00023	0.000021	n/a
Zinc	12/12	0.0021	0.028	0.01	0.0023	n/a
Zirconium	11/12	0.0002	0.002	0.00079	0.00015	n/a
Radionuclides (pCi/L) (f)						
Beta activity	5/12	U-1.2	3.2*	~1.6*	0.37	n/a
Bismuth-214	2/12	0.0	9.4*	1.2	0.84	24,000
Tritium	2/12	U-320	260*	~35	42	80,000

Table 3.4 (continued)

Parameter	N det/ N total	Min(b)	Max(b)	Avg(c)	Standard error(d)	TWQC(e)
Volatile organics (µg/L)						
2-Butanone	1/12	U5.0	21	~6.3	1.3	n/a
Toluene	1/12	JB0.76	U1.0	~0.98	0.02	6,800

(a) All values were included in the calculations. Only parameters that have detections in one or more samples are listed in the table. The sampling and analysis plan contains a complete list of analyses performed.
(b) Prefix "J" indicates the value was estimated at or below the analytical detection limit by the laboratory; "U" indicates that the value was undetected at the analytical detection limit or MDA; "JB" indicates that the value was estimated at or below the analytical detection limit and the analyte was detected in the associated lab blank; "E" indicates that the percent difference between the parent sample and its serial dilution's concentration exceeds 10%; and "<" indicates the value for a parameter was not quantifiable at the analytical detection limit.
(c) A tilde (~) indicates that estimated values and/or detection limits were used in the calculation.
(d) Standard error of the mean.
(e) Tennessee General Water Quality Criteria for Recreation and Domestic Use, as amended (CRK 16, CRK 23,CRK 70). 4% of DOE DCG used for radionuclides, where applicable.
(f) Metals analysis for October sample from CRK 16 was unable to be conducted. The sample was consumed by analysis.
(g) Individual and average radionuclide concentrations significantly greater than zero are identified by an *. Detected radionuclides are those detected above MDA.

Table 3.5. Radiological constituents in settleable solids near the ORR, 2004[a]

Event	Co-60[b]	Cs-137[b]	Gross alpha[c]	Gross beta[c]
White Oak Creek Headwaters upstream from ORNL (WOCHW)				
September	*d*	1.1 ± 3.8	9 ± 25	65 ± 49
October	*d*	2.1 ± 4.7	*d*	9 ± 4
Melton Branch upstream from ORNL (MEK 2.1)				
September	*d*	*d*	12 ± 20	270 ± 80
October	*d*	*d*	40 ± 19	750 ± 110
White Oak Creek downstream from ORNL (WCK 2.6)				
September	*d*	19 ± 4	30 ± 30	81 ± 51
October	*d*	*d*	11 ± 27	100 ± 60
White Oak Lake at White Oak Dam (WCK 1.0)				
September	*d*	49 ± 5	*d*	130 ± 60
October	*d*	17 ± 5	17 ± 27	250 ± 70

[a]All data are given in picocuries per liter (1 pCi = 3.7E-02 Bq).
[b]Gamma scan performed on liquids and solids together.
[c]Alpha and beta scan performed on liquids only.
[d]No value detected above MDA.

Table 4.1. Y-12 Plant Discharge Point 017, OUTFALL 017

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration			Reference Value(b)	Number of Values Exceeding Reference
		Max	Min	Avg		
Flow, mgd	366	0.63	0.009	0.09	d	d
pH, Std Unit	52	7.2	6.6	d	9/ 6(e)	0
Kjeldahl Nitrogen	52	21.2	<1.0	<2.9	d	d
Ammonia as Nitrogen	52	11.2	<0.2	<2	64.8	0

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.2. Y-12 Plant Discharge Point 021, OUTFALL 021

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	362	4.391	0.03	0.3	d	d
pH, Std Unit	156	7.8	7.0	d	9/ 6(e)	0
Temperature, deg C	156	24.6	10.8	16.4	30.5	0
Total Residual Chlorine	156	<0.05	<0.05	<0.05	0.188	0

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.3. Y-12 Plant Discharge Point 051, OUTFALL 051

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	310	3.341	0.001	0.8	d	d
pH, Std Unit	107	7.95	6.2	d	9/ 6(e)	0
Mercury	52	0.0176	0.0012	0.0024	d	d

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.4. Y-12 Plant Discharge Point 055, OUTFALL 055

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	366	0.1285	0.0002	0.009	d	d
pH, Std Unit	104	8.1	7.0	d	9/ 6(e)	0
Total Residual Chlorine	103	<0.05	<0.05	<0.05	0.5	0
Mercury	105	0.0016	<0.0002	<0.0002	0.004	0

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.5. Y-12 Plant Discharge Point 077, OUTFALL 077

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	12	0.0114	0.0114	0.0114	d	d
pH, Std Unit	12	8.5	7.3	d	9/ 6(e)	0
Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.6. Y-12 Plant Discharge Point 125, OUTFALL 125

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	12	1.01	0.567	0.831	d	d
pH, Std Unit	12	7.4	6.7	d	9/ 6(e)	0
Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0
Mercury	4	<0.0002	<0.0002	<0.0002	d	d
Lead	4	0.0015	<0.0002	<0.0007	d	d

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

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Table 4.7. Y-12 Plant Discharge Point 135, OUTFALL 135

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	367	0.682	0.093	0.25	d	d

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

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Table 4.8. Y-12 Plant Discharge Point 200, OUTFALL 200

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	159	54.46	1.03	2.37	d	d
Alpha activity, pCi/L	52	39.0	4.9	17	d	d
Beryllium	12	<0.0005	<0.0005	<0.0005	d	d
Beta activity, pCi/L	52	35.0	5.6	16.	d	d
Cadmium	12	<0.01	<0.01	<0.01	d	d
Copper	12	<0.02	<0.02	<0.02	d	d
Iron	12	4.49	0.12	0.97	d	d
Fluoride	12	1.05	0.287	0.722	d	d
Gamma Activity, pCi/L	52	21.0	-16.0	-0.784	d	d
Hexane Extractable	156	<6.3	<5.5	<6.1	15	0
Mercury	52	0.0019	0.0007	0.001	d	d
Nitrate/Nitrite as Nitrogen	12	7.05	2.41	5.43	d	d
Lead	12	<0.1	<0.1	<0.1	d	d
Phosphate as Phosphorus	12	1.11	<0.307	<0.533	d	d
Sulfate	52	302.0	16.8	41.6	d	d
Uranium	52	0.102	0.011	0.043	d	d
Zinc	12	0.117	<0.05	<0.06	d	d

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.9. Y-12 Plant Discharge Point 200, OUTFALL 200

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration					Standard	Percentage of DCG	Total Curies
		Max	+/-	Min	+/-	Average			
Americium-241 (pCi/L)	52	0.62	+/-.39	-0.35*	+/-.2	0.072	0.025	0.24	2.4E-04
Cobalt-60 (pCi/L)	52	2.7*	+/-2.4	-2.7*	+/-2.4	0.37	0.16	0.0073	1.2E-03
Cesium-137 (pCi/L)	52	3.0*	+/-2.5	-5.1*	+/-4.2	0.43	0.19	0.014	1.4E-03
Neptunium-237 (pCi/L)	52	0.3*	+/-.2	-0.16*	+/-.14	0.0053	0.015	0.018	1.7E-05
Plutonium-238 (pCi/L)	52	0.43	+/-.24	-0.4*	+/-.11	-0.03	0.02	-0.07	-9E-05
Plutonium-239/240 (pCi/L)	52	0.1*	+/-.14	-0.18*	+/-.1	-0.03	0.009	-0.1	-9.6E-05
Radium-226 (pCi/L)	52	1.1	+/-.7	-0.42*	+/-.55	0.28	0.043	0.28	9.1E-04
Radium-228 (pCi/L)	52	3.0	+/-.95	-0.42*	+/-1.5	0.71	0.11	0.71	2.3E-03
Strontium-89/90 (pCi/L)	52	2.7*	+/-2.3	-4.9*	+/-2.4	-0.039	0.17	-0.0039	-1.3E-04
Total Radium Alpha (pCi/L)	52	1.5	+/-.41	0.007*	+/-.1	0.3	0.04	e	1.E-03
Technetium-99 (pCi/L)	52	41.0	+/-8.1	-9.6*	+/-8.4	9.7	1.4	0.0097	3.2E-02
Thorium-228 (pCi/L)	52	1.4	+/-.78	-0.61*	+/-.19	0.043	0.050	0.011	1.4E-04
Thorium-230 (pCi/L)	52	2.1	+/-.95	-0.6*	+/-.22	0.2	0.08	0.07	7E-04
Thorium-232 (pCi/L)	52	0.48	+/-.37	-0.1*	+/-.073	0.02	0.01	0.04	6E-05
Thorium-234 (pCi/L)	52	31.0	+/-3.3	0.078*	+/-.079	13	1.1	0.13	4.2E-02
Tritium (pCi/L)	52	830.0	+/-520	-730.0*	+/-420	162.2	44.42	0.008100	5.330E-01
Uranium-234 (pCi/L)	52	6.7	+/-1	1.5	+/-.42	3.6	0.19	0.72	1.2E-02
Uranium-235 (pCi/L)	52	0.57	+/-.27	-0.026*	+/-.073	0.23	0.020	0.038	7.5E-04
Uranium-236 (pCi/L)	52	0.3	+/-.17	0.0*	+/-0	0.090	0.0086	0.018	3.0E-04
Uranium-238 (pCi/L)	52	31.0	+/-3.3	3.1	+/-.58	13	1.1	2.1	4.2E-02

(e) Not applicable

* Provisional Result

1

Table 4.10. Y-12 Plant Discharge Point 201, OUTFALL 201

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
96-hour Toxicity Test with Ceriodaphnia	4	>100.0	>100.0	>100.0	d/ 100(e)	0
96-hour Toxicity Test with Fathead Minnows	4	>100.0	>100.0	>100.0	d/ 100(e)	0
NOEC, Ceriodaphnia	4	100.0	100.0	100.0	d/ 100(e)	0
NOEC, Fathead Minnows	4	100.0	100.0	100.0	d/ 100(e)	0
pH, Std Unit	156	8.0	7.2	d	8.5/ 6.5(e)	0
Temperature, deg C	156	21.1	7.9	15	30.5	0
Total Residual Chlorine	156	<0.05	<0.05	<0.05	0.019	0
Suspended Solids	52	26.8	<1.0	<4.4	d	d

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.11. Y-12 Plant Discharge Point 502, WEST END TREATMENT FACILITY

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration			Reference Value(b)	Number of Values Exceeding Reference
		Max	Min	Avg		
48-Hour Toxicity Test with Ceriodaphnia	2	24.8	17.3	21.0	d	d
Flow, mgd	18	0.064	0.02	0.05	d	d
pH, Std Unit	12	7.8	6.1	d	9/ 6(e)	0
Temperature, deg C	12	24.1	4.1	14	d	d
Silver	12	<0.001	<0.0004	<0.0005	0.05	0
Arsenic	12	<1.0	<1.0	<1.0	d	d
Boron	12	12.8	6.3	9.5	d	d
Beryllium	12	<0.0025	<0.0025	<0.0025	d	d
Calcium	12	20.9	12.5	16.2	d	d
Cadmium	12	0.0122	<0.0025	<0.0061	0.15	0
Chloride	12	2990.0	941.0	1900	d	d
Chromium	12	<0.1	<0.1	<0.1	1	0
Copper	12	0.13	<0.1	<0.1	1	0
Cyanide	12	<0.005	<0.005	<0.005	1.2	0
Iron	12	2.69	0.978	1.66	d	d
Fluoride	4	4.07	1.48	2.70	d	d
Hexane Extractable	12	<6.0	<5.4	<5.7	15	0
Mercury	12	<0.0002	<0.0002	<0.0002	d	d
Potassium	12	399.0	111.0	249.1	d	d
Lithium	12	2.97	2.48	2.73	d	d
Magnesium	12	8.75	5.44	7.15	d	d
Manganese	12	0.152	0.0545	0.101	d	d
Sodium	12	5420.0	3710.0	4528.3	d	d
Nickel	12	0.646	0.489	0.560	3.98	0
Nitrate/Nitrite as Nitrogen	12	4.9	1.83	3.3	150	0
Lead	12	0.0035	0.0019	0.0023	0.2	0
PCB, Total	3	<0.0005	<0.0005	<0.0005	0.001	0

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.12. Y-12 Plant Discharge Point 502, WEST END TREATMENT FACILITY

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Phosphate as Phosphorus	12	26.1	0.482	12.9	d	d
Selenium	12	<1.0	<1.0	<1.0	d	d
Sulfate	12	7900.0	5950.0	6997.5	d	d
Suspended Solids	12	12.0	<1.0	<3.8	40	0
Sum of TTO Analysis	3	<0.01	<0.01	<0.01	2.13	0
Uranium	4	0.017	0.0089	0.012	d	d
Zinc	12	0.661	<0.25	<0.38	2	0

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

2

Table 4.13. Y-12 Plant Discharge Point 512, OUTFALL 512 (GWTF)

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
48-hour Toxicity Test with Ceriodaphnia	4	>100.0	92.4	>98.1	d	d
Flow, mgd	205	0.038	0.0001	0.01	d	d
pH, Std Unit	133	8.3	7.0	d	9/ 6(e)	0
Alpha activity, pCi/L	44	22.0	2.7	11	d	d
Beta activity, pCi/L	44	24.0	5.0	10.	d	d
Copper	132	0.0215	<0.02	<0.02	d	d
Iron	132	0.668	<0.05	<0.08	1	0
Gamma Activity, pCi/L	44	16.0	-21.0	-0.743	d	d
Manganese	132	5.4	0.0095	1.1	d	d
Lead	132	<0.1	<0.1	<0.1	d	d
PCB, Total	12	<0.0005	<0.0005	<0.0005	0.001	0
Uranium	44	0.065	0.011	0.029	d	d

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.14. Y-12 Plant Discharge Point 512, OUTFALL 512 (GWTF)

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration					Percentage of Standard	Percentage of DCG	Total Curies
		Max	+/-	Min	+/-	Average			
Americium-241 (pCi/L)	44	0.74*	+/-.88	-0.43*	+/-.22	0.073	0.037	0.24	1.2E-06
Cobalt-60 (pCi/L)	44	3.5*	+/-2.3	-1.4*	+/-2	0.73	0.16	0.015	1.2E-05
Cesium-137 (pCi/L)	44	3.5*	+/-2.2	-1.8*	+/-2.3	0.31	0.18	0.010	4.9E-06
Neptunium-237 (pCi/L)	44	0.38	+/-.27	-0.25*	+/-.14	0.010	0.017	0.033	1.6E-07
Plutonium-238 (pCi/L)	44	0.36	+/-.22	-0.41*	+/-.097	-0.035	0.021	-0.087	-5.5E-07
Plutonium-239/240 (pCi/L)	44	0.16	+/-.12	-0.21*	+/-.067	-0.014	0.0095	-0.046	-2.1E-07
Radium-226 (pCi/L)	44	1.4	+/-.89	-0.34*	+/-9.3	0.26	0.048	0.26	4.0E-06
Radium-228 (pCi/L)	44	2.8	+/-1.2	-0.65*	+/-.51	0.70	0.10	0.70	1.1E-05
Strontium-89/90 (pCi/L)	44	5.0*	+/-4.3	-9.8*	+/-5.2	0.29	0.30	0.029	4.5E-06
Total Radium Alpha (pCi/L)	44	0.93	+/-.37	0.11*	+/-.16	0.47	0.032	e	7.3E-06
Technetium-99 (pCi/L)	44	28.0	+/-6.9	-18.0*	+/-7.4	0.280	1.20	0.00030	4.4E-06
Thorium-228 (pCi/L)	44	2.1	+/-.66	-0.51*	+/-.24	0.075	0.058	0.019	1.2E-06
Thorium-230 (pCi/L)	44	1.3	+/-.6	-0.65*	+/-.18	0.11	0.067	0.037	1.8E-06
Thorium-232 (pCi/L)	44	0.11*	+/-.15	-0.15*	+/-.14	0.0031	0.0082	0.0062	4.8E-08
Thorium-234 (pCi/L)	44	20.0	+/-2.3	2.9	+/-.6	8.7	0.65	0.087	1.4E-04
Tritium (pCi/L)	44	1700.0	+/-770	330.0*	+/-730	1028.	50.61	0.05140	1.610E-02
Uranium-234 (pCi/L)	44	4.8	+/-.77	0.98	+/-.39	2.3	0.14	0.45	3.5E-05
Uranium-235 (pCi/L)	44	0.59	+/-.34	-0.029*	+/-.079	0.16	0.020	0.026	2.4E-06
Uranium-236 (pCi/L)	44	0.19	+/-.16	-0.025*	+/-.073	0.053	0.0080	0.011	8.3E-07
Uranium-238 (pCi/L)	44	20.0	+/-2.3	2.9	+/-.6	8.7	0.65	1.4	1.4E-04

(e) Not applicable

* Provisional Result

1

Table 4.15. Y-12 Plant Discharge Point 520, OUTFALL 520

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
pH, Std Unit	1	6.8	6.8	d	9/ 6(e)	0
Dissolved Solids	1	<1.0	<1.0	<1.0	d	d
Uranium	1	<0.001	<0.001	<0.001	d	d

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.16. Y-12 Plant Discharge Point 520, OUTFALL 520

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	+/-	Min	+/-	Average	Standard	Percentage of DCG	Total Curies
Alpha activity (pCi/L)	1	0.7		0.7		0.7		0.0	NA
Americium-241 (pCi/L)	1	-0.23		-0.23		-0.23		0.0	NA
Beta activity (pCi/L)	1	0.66		0.66		0.66		0.0	NA
Cobalt-60 (pCi/L)	1	-2.0		-2.0		-2.0		0.0	NA
Cesium-137 (pCi/L)	1	1.8		1.8		1.8		0.0	NA
Gamma Activity (pCi/L)	1	4.5		4.5		4.5		0.0	NA
Neptunium-237 (pCi/L)	1	0.025		0.025		0.025		0.0	NA
Plutonium-238 (pCi/L)	1	-0.41		-0.41		-0.41		0.0	NA
Plutonium-239/240 (pCi/L)	1	0.076		0.076		0.076		0.0	NA
Radium-226 (pCi/L)	1	0.069		0.069		0.069		0.0	NA
Radium-228 (pCi/L)	1	1.0		1.0		1.0		0.0	NA
Strontium-89/90 (pCi/L)	1	-2.0		-2.0		-2.0		0.0	NA
Total Radium Alpha (pCi/L)	1	0.29		0.29		0.29		0.0	NA
Technetium-99 (pCi/L)	1	-0.1		-0.1		-0.1		0.0	NA
Thorium-228 (pCi/L)	1	-0.064		-0.064		-0.064		0.0	NA
Thorium-230 (pCi/L)	1	0.42		0.42		0.42		0.0	NA
Thorium-232 (pCi/L)	1	0.0		0.0		0.0		0.0	NA
Thorium-234 (pCi/L)	1	-0.035		-0.035		-0.035		0.0	NA
Tritium (pCi/L)	1	2700.0		2700.0		2700.0		0.0	NA
Uranium-234 (pCi/L)	1	-0.13		-0.13		-0.13		0.0	NA
Uranium-235 (pCi/L)	1	-0.076		-0.076		-0.076		0.0	NA
Uranium-238 (pCi/L)	1	-0.035		-0.035		-0.035		0.0	NA

(e) Not applicable
* Provisional Result

1

Table 4.17. Y-12 Plant Discharge Point 550, OUTFALL 550

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	366	0.041	0.009	0.02	d	d
pH, Std Unit	52	7.7	7.0	d	9/ 6(e)	0
Mercury	52	0.0006	<0.0002	<0.0002	0.004	0

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.18. Y-12 Plant Discharge Point 551, CENTRAL MERCURY TREATMENT UNIT

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	366	0.053	0.004	0.01	d	d
pH, Std Unit	52	7.4	6.4	d	9/ 6(e)	0
Mercury	52	0.0015	<0.0002	<0.0003	0.004	0
Uranium	12	0.049	0.0058	0.013	d	d

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.19. Y-12 Plant Discharge Point 551, CENTRAL MERCURY TREATMENT UNIT

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration					Standard	Percentage of DCG	Total Curies
		Max	+/-	Min	+/-	Average			
Alpha activity (pCi/L)	12	23.0	+/-10	-2.5*	+/-7.9	6.5	1.9	e	1.2E-04
Americium-241 (pCi/L)	12	0.15*	+/-.27	-0.28*	+/-.64	-0.026	0.040	-0.088	-5.0.E-07
Beta activity (pCi/L)	12	110.0	+/-18	-76.0*	+/-55	39.7	14.7	e	7.54E-04
Cobalt-60 (pCi/L)	12	1.4*	+/-1.6	-0.22*	+/-2.2	0.72	0.15	0.014	1.4E-05
Cesium-137 (pCi/L)	12	4.0	+/-3.7	-1.4*	+/-1.7	0.45	0.43	0.015	8.6E-06
Gamma Activity (pCi/L)	12	14.0*	+/-17	-15.0*	+/-17	-1.05	2.86	e	-1.99E-05
Neptunium-237 (pCi/L)	12	0.36	+/-.21	-0.16*	+/-.12	-0.0034	0.039	-0.011	-6.4E-08
Plutonium-238 (pCi/L)	12	0.082*	+/-.14	-0.22*	+/-.13	-0.055	0.031	-0.14	-1.0E-06
Plutonium-239/240 (pCi/L)	12	0.13*	+/-.14	-0.15*	+/-.075	-0.027	0.018	-0.090	-5.2E-07
Radium-226 (pCi/L)	12	0.72	+/-.45	-0.59*	+/-.4	0.11	0.13	0.11	2.0E-06
Radium-228 (pCi/L)	12	3.0	+/-1	0.39*	+/-1.9	1.3	0.23	1.3	2.5E-05
Strontium-89/90 (pCi/L)	12	2.6*	+/-1.8	-4.4*	+/-2.6	-0.14	0.54	e	-2.7E-06
Total Radium Alpha (pCi/L)	12	1.7	+/-.54	0.4*	+/-.28	1	0.1	e	2E-05
Technetium-99 (pCi/L)	12	150.0	+/-11	-0.28*	+/-7.8	62	15	0.062	1.2E-03
Thorium-228 (pCi/L)	12	0.095*	+/-.2	-0.2*	+/-.14	-0.06	0.03	-0.01	-1.E-06
Thorium-230 (pCi/L)	12	3.1	+/-.7	-0.4*	+/-.2	0.4	0.3	0.1	7E-06
Thorium-232 (pCi/L)	12	0.069*	+/-.12	-0.039*	+/-.056	0.00020	0.011	0.00040	4.0E-09
Thorium-234 (pCi/L)	12	15.0	+/-1.7	1.5	+/-.38	3.9	1.1	0.039	7.5E-05
Tritium (pCi/L)	12	680.0*	+/-600	-660.0*	+/-440	-9.333	124.1	-0.0005000	-1.770E-04
Uranium-234 (pCi/L)	12	7.6	+/-1	0.9	+/-.3	2.35	0.6	0.5	4.E-05
Uranium-235 (pCi/L)	12	0.51	+/-.23	0.016*	+/-.088	0.13	0.038	0.022	2.5E-06
Uranium-236 (pCi/L)	12	0.081*	+/-.089	-0.022*	+/-.05	0.018	0.0080	0.0035	3.3E-07
Uranium-238 (pCi/L)	12	15.0	+/-1.7	1.5	+/-.38	3.9	1.1	0.66	7.5E-05

(e) Not applicable

* Provisional Result

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Table 4.20. Y-12 Plant Category I Outfalls

From: 2004/01/01 To: 2004/12/31

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
003	Flow, mgd	2	0.68481	0.11414	0.39948	d	d
	pH, Standard Units	2	7.5	7.3	d	9/ 4(e)	0
006	Flow, mgd	2	0.18	0.13696	0.16	d	d
	pH, Standard Units	2	7.8	7.6	d	9/ 4(e)	0
007	Flow, mgd	2	0.252	0.18262	0.217	d	d
	pH, Standard Units	2	7.7	7.5	d	9/ 4(e)	0
008	Flow, mgd	2	0.00761	0.00076	0.0042	d	d
	pH, Standard Units	2	7.9	7.8	d	9/ 4(e)	0
009	Flow, mgd	2	0.1296	0.12174	0.1257	d	d
	pH, Standard Units	2	8.2	8.0	d	9/ 4(e)	0
011	Flow, mgd	2	0.00038	0.00036	0.00037	d	d
	pH, Standard Units	2	8.1	7.7	d	9/ 4(e)	0
015	Outfall closed						
018	Outfall closed						
032	Outfall was eliminated						
033	Flow, mgd	3	0.04565	0.00571	0.0200	d	d
	pH, Standard Units	3	7.8	7.1	d	9/ 4(e)	0
045	Flow, mgd	2	0.00381	0.00038	0.00209	d	d
	pH, Standard Units	2	8.0	7.8	d	9/ 4(e)	0

Table 4.20 (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
046	Flow, mgd	2	0.00761	0.00457	0.00609	d	d
	pH, Standard Units	2	8.1	8.0	d	9/ 4(e)	0
058	Flow, mgd	2	0.05707	0.01522	0.03614	d	d
	pH, Standard Units	2	8.2	7.9	d	9/ 4(e)	0
062	Flow, mgd	2	0.01826	0.01141	0.01484	d	d
	pH, Standard Units	2	7.9	7.0	d	9/ 4(e)	0
086	Flow, mgd	2	0.00144	0.00019	0.000815	d	d
	pH, Standard Units	2	8.1	7.9	d	9/ 4(e)	0
087	Flow, mgd	2	0.0137	0.00381	0.00875	d	d
	pH, Standard Units	2	8.9	8.2	d	9/ 4(e)	0
098	Outfall eliminated						
110	Flow, mgd	2	0.00571	0.00304	0.00438	d	d
	pH, Standard Units	2	8.0	7.1	d	9/ 4(e)	0
134	Flow, mgd	2	0.00228	0.00038	0.00133	d	d
	pH, Standard Units	2	8.1	7.3	d	9/ 4(e)	0
213	Flow, mgd	1	0.00951	0.00951	0.00951	d	d
	pH, Standard Units	1	8.2	8.2	d	9/ 4(e)	0
S01	Flow, mgd	2	0.68481	0.216	0.450	d	d
	pH, Standard Units	2	7.7	7.3	d	9/ 4(e)	0
S03	Flow, mgd	2	0.144	0.03805	0.0900	d	d
	pH, Standard Units	2	7.8	7.7	d	9/ 4(e)	0
S04	Flow, mgd	2	0.34245	0.1728	0.2576	d	d
	pH, Standard Units	2	7.6	7.4	d	9/ 4(e)	0

Table 4.20 (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
S06	Flow, mgd	362	7.44	0.0155	0.342	d	d
	pH, Standard Units	2	7.4	7.3	d	9/ 4(e)	0
S07	Flow, mgd	368	4.79	0.02	0.3	d	d
	pH, Standard Units	4	8.37	6.9	d	9/ 4(e)	0
S09	Flow, mgd	2	0.3805	0.1728	0.2766	d	d
	pH, Standard Units	2	7.4	7.2	d	9/ 4(e)	0
S15	Flow, mgd	2	0.45654	0.288	0.372	d	d
	pH, Standard Units	2	7.8	7.6	d	10/ 6(e)	0
S16	Flow, mgd	2	0.34245	0.01598	0.1792	d	d
	pH, Standard Units	2	7.4	6.4	d	10/ 6(e)	0
S18	Flow, mgd	2	1.8	0.91308	1.4	d	d
	pH, Standard Units	2	7.5	7.4	d	9/ 4(e)	0

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

Table 4.21. Y-12 Plant Category II Outfalls

From: 2004/01/01 To: 2004/12/31

Outfall	Parameter	Number of Samples	Concentration(a)			Reference Value(b)	Number of Values Exceeding Reference
			Max	Min	Avg		
004	Flow, mgd	4	0.05	0.0015	0.01	d	d
	pH, Standard Units	4	7.9	7.5	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
010	Flow, mgd	4	0.0432	0.0022	0.021	d	d
	pH, Standard Units	4	7.5	7.0	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
014	Flow, mgd	4	0.04	0.00114	0.02	d	d
	pH, Standard Units	4	7.7	7.4	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
016	Flow, mgd	4	0.008	0.00076	0.004	d	d
	pH, Standard Units	4	7.8	7.5	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
019	Flow, mgd	4	0.0576	0.00038	0.021	d	d
	pH, Standard Units	4	8.1	7.3	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
020	Flow, mgd	5	0.118	0.00228	0.0556	d	d
	pH, Standard Units	5	7.9	7.0	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
041	Flow, mgd	4	0.0076	0.00019	0.0029	d	d
	pH, Standard Units	4	8.1	7.5	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
044	Flow, mgd	4	0.0114	0.00076	0.0052	d	d
	pH, Standard Units	4	7.9	7.7	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0

Table 4.21 (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
057	Flow, mgd	4	0.00114	0.000075	0.00068	d	d
	pH, Standard Units	4	7.9	7.6	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
063	Flow, mgd	4	0.02	0.00038	0.006	d	d
	pH, Standard Units	4	8.1	7.6	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
064	Flow, mgd	4	0.002	0.000045	0.001	d	d
	pH, Standard Units	4	7.8	7.4	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
067	Flow, mgd	4	0.03	0.00009	0.02	d	d
	pH, Standard Units	4	7.9	7.3	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
083	Flow, mgd	4	0.01	0.00019	0.003	d	d
	pH, Standard Units	4	8.0	7.4	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
088	Flow, mgd	4	0.0114	0.000045	0.0029	d	d
	pH, Standard Units	4	8.0	7.5	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
099	Flow, mgd	4	0.0114	0.00076	0.0036	d	d
	pH, Standard Units	4	8.1	7.1	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
102	Flow, mgd	4	0.238	0.0015	0.068	d	d
	pH, Standard Units	4	8.2	7.3	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0

Table 4.21 (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
126	Flow, mgd	4	0.0057	0.00038	0.0029	d	d
	pH, Standard Units	4	7.8	7.5	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
S02	Flow, mgd	4	0.432	0.02	0.1	d	d
	pH, Standard Units	4	8.0	7.2	d	9/ 4(e)	0
	Total Residual Chlorine	4	<0.05	<0.05	<0.05	0.5	0
S08	Flow, mgd	369	5.8	0.00034	0.13	d	d
	pH, Standard Units	6	8.55	7.5	d	9/ 4(e)	0
S10	Flow, mgd	4	0.60883	0.00071	0.17	d	d
	pH, Standard Units	4	7.7	7.5	d	9/ 4(e)	0
S11	Flow, mgd	4	0.3858\	0.0003	0.1	d	d
	pH, Standard Units	4	7.4	7.2	d	9/ 4(e)	0
S12	Flow, mgd	4	0.01406	0.00009	0.01	d	d
	pH, Standard Units	4	7.8	5.9	d	9/ 4(e)	0
S13	Flow, mgd	4	0.62755	0.05494	0.2280	d	d
	pH, Standard Units	6	8.09	7.2	d	9/ 4(e)	0
S17	Flow, mgd	5	10.5984	0.147	2.4	d	d
	pH, Standard Units	4	7.7	7.2	d	9/ 4(e)	0
S20	Flow, mgd	4	0.0576	0.00114	0.0251	d	d
	pH, Standard Units	4	7.8	6.5	d	9/ 4(e)	0
S21	Outfall eliminated						

Table 4.21 (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
S22	Flow, mgd	4	0.01152	0.00009	0.005	d	d
	pH, Standard Units	4	7.9	7.1	d	10/ 6(e)	0
S24	Flow, mgd	355	79.92	0.00002	3	d	d
	pH, Standard Units	8	8.78	7.6	d	9/ 4(e)	0
S25	Flow, mgd	4	0.0864	0.00019	0.027	d	d
	pH, Standard Units	4	8.1	7.2	d	10/ 6(e)	0
S26	Flow, mgd	4	0.0432	0.0019	0.021	d	d
	pH, Standard Units	4	7.8	7.3	d	10/ 6(e)	0
S27	Flow, mgd	4	0.288	0.000045	0.092	d	d
	pH, Standard Units	4	8.0	7.6	d	10/ 6(e)	0
S28	Flow, mgd	4	0.72	0.004	0.2	d	d
	pH, Standard Units	4	8.1	7.4	d	10/ 6(e)	0
S29	Flow, mgd	4	0.072	0.0076	0.045	d	d
	pH, Standard Units	4	7.8	7.6	d	10/ 6(e)	0

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

Table 4.22. Y-12 Plant Category III Outfalls

From: 2004/01/01 To: 2004/12/31

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
002	Flow, mgd	12	0.11414	0.00685	0.444	d	d
	pH, Standard Units	12	7.8	7.5	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0
034	Flow, mgd	12	0.15979	0.07609	0.1224	d	d
	pH, Standard Units	12	7.7	7.2	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.08	0.5	0
042	Flow, mgd	12	0.00685	0.000076	0.00255	d	d
	pH, Standard Units	12	7.9	7.3	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0
047	Flow, mgd	12	0.18262	0.00913	0.0798	d	d
	pH, Standard Units	12	7.8	7.2	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0
048	Flow, mgd	12	0.22827	0.00038	0.043	d	d
	pH, Standard Units	12	7.7	7.1	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0
054	Flow, mgd	12	0.00152	0.000038	0.00025	d	d
	pH, Standard Units	12	8.2	7.6	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0
071	Flow, mgd	12	0.06392	0.0137	0.0221	d	d
	pH, Standard Units	12	8.0	7.5	d	9/ 4(e)	0
	Total Residual Chlorine	14	<0.05	<0.05	<0.05	0.5	0
109	Flow, mgd	12	0.13696	0.09131	0.1116	d	d
	pH, Standard Units	12	8.1	7.5	d	9/ 4(e)	0
	Total Residual Chlorine	12	0.188	<0.05	<0.1	0.5	0

Table 4.22 (continued)

Outfall	Parameter	Number of Samples	Concentration(a) Max	Min	Avg	Reference Value(b)	Number of Values Exceeding Reference
113	Flow, mgd	4	0.432	0.04565	0.235	d	d
	pH, Standard Units	11	8.4	6.6	d	9/ 4(e)	0
	Total Residual Chlorine	11	<0.05	<0.05	<0.05	0.5	0
114	Flow, mgd	12	0.06392	0.00913	0.0167	d	d
	pH, Standard Units	12	8.2	7.6	d	9/ 4(e)	0
	Total Residual Chlorine	12	0.298	<0.05	<0.07	0.5	0
S05	Flow, mgd	12	0.10653	0.00685	0.0393	d	d
	pH, Standard Units	12	6.8	6.1	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0
S14	Flow, mgd	14	1.763	0.00114	0.177	d	d
	pH, Standard Units	16	8.1	7.1	d	9/ 4(e)	0
	Total Residual Chlorine	12	<0.05	<0.05	<0.05	0.5	0

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

Table 4.23. Y-12 Plant Discharge Point S19, S19, ROGER'S QUARRY

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	366	1.413	0.186	0.366	d	d
pH, Std Unit	24	8.2	7.3	d	9/ 6(e)	0
Silver	12	<0.02	<0.02	<0.02	d	d
Aluminum	12	0.819	<0.2	<0.3	d	d
Arsenic	12	<0.2	<0.2	<0.2	d	d
Boron	12	<0.1	<0.1	<0.1	d	d
Barium	12	0.0571	0.0486	0.0515	d	d
Beryllium	12	<0.0005	<0.0005	<0.0005	d	d
Calcium	12	39.6	33.9	37.4	d	d
Cadmium	12	<0.01	<0.01	<0.01	d	d
Cobalt	12	<0.02	<0.02	<0.02	d	d
Chromium	12	<0.02	<0.02	<0.02	d	d
Copper	12	<0.02	<0.02	<0.02	d	d
Iron	12	0.775	<0.05	<0.2	d	d
Potassium	12	2.51	<2.0	<2.1	d	d
Lithium	12	0.0169	0.0106	0.0128	d	d
Magnesium	12	10.8	9.44	10.2	d	d
Manganese	12	0.116	<0.005	<0.03	d	d
Molybdenum	12	<0.05	<0.05	<0.05	d	d
Sodium	12	2.0	1.31	1.7	d	d
Nickel	12	<0.05	<0.05	<0.05	d	d
Lead	12	<0.1	<0.1	<0.1	d	d
Antimony	12	<0.2	<0.2	<0.2	d	d
Strontium	12	0.216	0.192	0.206	d	d
Thallium	12	<0.2	<0.2	<0.2	d	d
Uranium	12	<0.001	<0.001	<0.001	d	d
Vanadium	12	<0.02	<0.02	<0.02	d	d
Zinc	12	0.0531	<0.05	<0.0503	d	d

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

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Table 4.24. Y-12 Plant Discharge Point S19, S19, ROGER'S QUARRY

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration					Standard	Percentage of DCG	Total Curies
		Max	+/-	Min	+/-	Average			
Alpha activity (pCi/L)	12	3.0	+/-2	-1.7*	+/-1.7	0.57	0.36	e	2.9E-04
Americium-241 (pCi/L)	12	0.28	+/-.3	-0.24*	+/-.2	0.0043	0.045	0.014	2.2E-06
Beta activity (pCi/L)	12	7.3	+/-4.3	-3.9*	+/-4.4	2.4	0.88	e	1.2E-03
Cobalt-60 (pCi/L)	12	2.1*	+/-1.6	-0.53*	+/-2.2	0.65	0.24	0.013	3.3E-04
Cesium-137 (pCi/L)	12	1.2*	+/-2.3	-2.4*	+/-2.4	-0.23	0.38	-0.0076	-1.2E-04
Gamma Activity (pCi/L)	12	9.2*	+/-17	-18.0*	+/-17	1.4	2.1	e	7.2E-04
Neptunium-237 (pCi/L)	12	0.037*	+/-.088	-0.15*	+/-.13	-0.037	0.013	-0.12	-1.9E-05
Plutonium-238 (pCi/L)	12	0.23	+/-.2	-0.2*	+/-.16	0.0005	0.03	0.001	3E-07
Plutonium-239/240 (pCi/L)	12	0.066*	+/-.097	-0.084*	+/-.14	-0.023	0.013	-0.078	-1.2E-05
Radium-226 (pCi/L)	12	0.78	+/-.59	-0.098*	+/-.25	0.24	0.080	0.24	1.2E-04
Radium-228 (pCi/L)	12	0.94*	+/-.75	-1.6*	+/-1.7	0.027	0.22	0.027	1.4E-05
Strontium-89/90 (pCi/L)	12	1.5*	+/-2	-2.0*	+/-1.5	0.17	0.32	0.017	8.7E-05
Total Radium Alpha (pCi/L)	12	0.6	+/-.34	-0.086*	+/-.033	0.2	0.06	e	8E-05
Technetium-99 (pCi/L)	12	22.0	+/-6.7	-15.0*	+/-7.5	0.617	2.82	0.000600	3.13E-04
Thorium-228 (pCi/L)	12	1.3	+/-.62	-0.23*	+/-.18	0.17	0.14	0.042	8.5E-05
Thorium-230 (pCi/L)	12	1.4	+/-.83	-0.25*	+/-.17	0.19	0.13	0.063	9.6E-05
Thorium-232 (pCi/L)	12	0.013*	+/-.11	-0.11*	+/-.1	-0.036	0.013	-0.072	-1.8E-05
Thorium-234 (pCi/L)	12	0.24	+/-.15	-0.02*	+/-.14	0.1	0.03	0.001	6E-05
Tritium (pCi/L)	12	700.0*	+/-500	-420.0*	+/-490	65.5	92.77	0.0033	3.32E-02
Uranium-234 (pCi/L)	12	0.51	+/-.3	-0.051*	+/-.11	0.17	0.051	0.034	8.7E-05
Uranium-235 (pCi/L)	12	0.047*	+/-.11	-0.041*	+/-0	0.0022	0.0083	0.00040	1.1E-06
Uranium-236 (pCi/L)	12	0.074*	+/-.12	-0.057*	+/-.041	-0.00080	0.0094	-0.0002	-4.0E-07
Uranium-238 (pCi/L)	12	0.24	+/-.15	-0.02*	+/-.14	0.1	0.03	0.02	6E-05

(e) Not applicable

* Provisional Result

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Table 4.25. Y-12 Plant Discharge Point SS6, SANITARY SEWER STATION 6

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration			Reference Value(b)	Number of Values Exceeding Reference
		Max	Min	Avg		
Flow, gpd	367	3190000.0	330000.0	663104.8	d	d
pH, Std Unit	51	7.7	6.8	d	9/ 6(e)	0
Silver	52	0.0071	<0.0004	<0.002	0.1	0
Aluminum	52	0.8	<0.2	<0.3	d	d
Arsenic	52	0.0099	<0.002	<0.002	0.015	0
Boron	52	0.152	<0.1	<0.1	d	d
Beryllium	52	0.0009	<0.0002	<0.0003	d	d
Benzene	12	<0.005	<0.005	<0.005	0.015	0
Biochemical Oxygen	52	158.0	24.1	44.5	300	0
Cadmium	52	<0.001	<0.001	<0.001	0.005	0
Cobalt	33	0.0029	0.0008	0.001	d	d
Chromium	52	0.0074	<0.004	<0.004	0.075	0
Copper	52	0.0808	0.0266	0.0485	0.21	0
Cyanide	12	0.0056	<0.005	<0.005	0.062	0
Iron	52	3.57	0.203	0.593	15	0
Hexane Extractable	52	7.27	<4.6	<6.2	50	0
Mercury	52	0.0098	0.0004	0.002	0.035	0
Kjeldahl Nitrogen	52	18.2	2.21	11.1	90	0
Methylene chloride	12	<0.005	<0.005	<0.005	0.041	0
Manganese	52	0.0748	0.0244	0.0446	d	d
Nickel	52	0.012	<0.002	<0.005	0.032	0
Nitrate/Nitrite as Nitrogen	52	1.89	0.328	0.873	0	
Lead	52	0.0219	0.0003	0.002	0.074	0
Phenols - Total Recoverable	52	0.0224	<0.005	<0.01	0.5	0
Selenium	52	<0.2	<0.004	<0.07	d	d
Suspended Solids	52	113.0	11.0	58.2	300	0
Toluene	12	<0.005	<0.005	<0.005	0.02	0

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.26. Y-12 Plant Discharge Point SS6, SANITARY SEWER STATION 6

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Trichloroethene	12	<0.005	<0.005	<0.005	0.027	0
Uranium	89	0.0133	0.0021	0.0062	d	d
Zinc	52	0.18	0.0535	0.10	0.75	0

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

2

Table 4.27. Y-12 Plant Discharge Point SS6, SANITARY SEWER STATION 6

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration					Percentage of		
		Max	+/-	Min	+/-	Average	Standard	DCG	Total Curies
Alpha activity (pCi/L)	52	11.0	+/-7.6	-3.4*	+/-6	4.1	0.40	e	3.8E-03
Beta activity (pCi/L)	52	21.0*	+/-21	-7.2*	+/-9.6	5.8	0.73	e	5.3E-03
Cobalt-60 (pCi/L)	1	0.45*	+/-1.4	0.45*	+/-1.4	0.45		0.0090	4.1E-04
Cesium-137 (pCi/L)	1	-0.32*	+/-1.4	-0.32*	+/-1.4	-0.32		-0.011	-2.9E-04
Gamma Activity (pCi/L)	52	19.0*	+/-15	-20.0*	+/-17	-3.56	1.39	e	-3.27E-03
Plutonium-238 (pCi/L)	1	-0.036*	+/-.1	-0.036*	+/-.1	-0.036		-0.090	-3.3E-05
Plutonium-239/240 (pCi/L)	1	-0.047*	+/-.097	-0.047*	+/-.097	-0.047		-0.16	-4.3E-05
Radium-228 (pCi/L)	1	12.0	+/-6.5	12.0	+/-6.5	12.0		12.0	1.10E-02
Uranium-234 (pCi/L)	52	4.6	+/-.89	1.4	+/-.38	2.6	0.11	0.52	2.4E-03
Uranium-235 (pCi/L)	52	0.35	+/-.27	-0.11*	+/-.086	0.090	0.013	0.015	8.2E-05
Uranium-236 (pCi/L)	52	0.15	+/-.14	-0.059*	+/-.044	0.031	0.0056	0.0063	2.9E-05
Uranium-238 (pCi/L)	52	4.0	+/-.75	0.55	+/-.32	1.9	0.10	0.32	1.8E-03

(e) Not applicable

* Provisional Result

1

Table 4.28. Y-12 Plant Discharge Point 94221, SWHISS STATION 9422-1

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	366	79.0	6.5	9.5	d	d
pH, Std Unit	149	8.3	7.2	d	9/ 6(e)	0
Silver	149	<0.02	<0.02	<0.02	0.0041	0
Aluminum	149	11.9	<0.2	<0.6	d	d
Arsenic	149	<0.2	<0.2	<0.2	0.0014	0
Boron	149	0.119	<0.1	<0.1	d	d
Barium	149	0.153	0.0391	0.0464	d	d
Beryllium	149	0.0009	<0.0005	<0.0005	0.0013	0
Calcium	149	56.3	23.4	41.5	d	d
Cadmium	149	0.0128	<0.01	<0.01	0.0039	1
Cobalt	149	<0.02	<0.02	<0.02	d	d
Chromium	149	<0.02	<0.02	<0.02	0.016	0
Copper	149	0.0504	<0.02	<0.02	0.0177	2
Iron	149	11.7	0.0758	0.486	d	d
Mercury	398	0.0081	<0.0002	<0.0005	0.00015	284
Potassium	149	5.76	<2.0	<2.2	d	d
Lithium	149	0.347	<0.01	<0.03	d	d
Magnesium	149	13.0	5.7	11	d	d
Manganese	149	1.08	0.013	0.056	d	d
Molybdenum	149	0.0561	<0.05	<0.05	d	d
Sodium	149	53.7	4.3	9.7	d	d
Ammonia as Nitrogen	149	3.84	<0.2	<0.2	d	d
Nickel	149	<0.05	<0.05	<0.05	1.418	0
Nitrate/Nitrite as Nitrogen	149	2.22	0.147	0.962	10	0
Lead	149	<0.1	<0.1	<0.1	0.0817	0
Antimony	149	<0.2	<0.2	<0.2	4.31	0
Selenium	149	<0.2	<0.2	<0.2	0.02	0.

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.29. Y-12 Plant Discharge Point 94221, SWHISS STATION 9422-1

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Strontium	149	0.129	0.0607	0.108	d	d
Suspended Solids	149	393.0	<1.0	<12	d	d
Thorium	149	<0.2	<0.2	<0.2	d	d
Titanium	149	0.271	<0.05	<0.05	d	d
Thallium	149	<0.2	<0.2	<0.2	0.0063	0
Uranium	52	0.035	0.0035	0.012	d	d
Vanadium	149	<0.02	<0.02	<0.02	d	d
Zinc	149	0.216	<0.05	<0.05	0.117	1
Zirconium	149	<0.2	<0.2	<0.2	d	d

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

2

Table 4.30. Y-12 Plant Discharge Point 94221, SWHISS STATION 9422-1

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration					Percentage of Standard	DCG	Total Curies
		Max	+/-	Min	+/-	Average			
Alpha activity (pCi/L)	52	13.0	+/-4	-2.0*	+/-2.5	5.5	0.48	e	7.2E-02
Americium-241 (pCi/L)	52	0.69	+/-.32	-0.38*	+/-.28	0.074	0.025	0.25	9.7E-04
Beta activity (pCi/L)	52	17.0	+/-5.3	-1.5*	+/-4.9	5.5	0.54	e	7.2E-02
Cobalt-60 (pCi/L)	52	3.4*	+/-2.1	-2.5*	+/-3.1	0.39	0.16	0.0077	5.1E-03
Cesium-137 (pCi/L)	52	2.3*	+/-2.2	-1.8*	+/-2.5	0.49	0.13	0.016	6.5E-03
Gamma Activity (pCi/L)	52	18.0*	+/-17	-20.0*	+/-16	-0.704	1.08	e	-9.26E-03
Neptunium-237 (pCi/L)	52	0.11*	+/-.14	-0.27*	+/-.15	-0.047	0.010	-0.16	-6.2E-04
Plutonium-238 (pCi/L)	52	0.19	+/-.18	-0.46*	+/-.14	-0.056	0.016	-0.14	-7.4E-04
Plutonium-239/240 (pCi/L)	52	0.15*	+/-.11	-0.2*	+/-.062	-0.02	0.009	-0.07	-3E-04
Radium-226 (pCi/L)	52	0.87	+/-.97	-0.35*	+/-.82	0.22	0.045	0.22	2.9E-03
Radium-228 (pCi/L)	52	2.6*	+/-1.5	-0.58*	+/-1.1	0.65	0.092	0.65	8.6E-03
Strontium-89/90 (pCi/L)	52	3.9*	+/-2.2	-5.1*	+/-2.6	0.17	0.20	0.017	2.2E-03
Total Radium Alpha (pCi/L)	52	0.97	+/-.43	-0.17*	+/-.12	0.30	0.032	e	3.9E-03
Technetium-99 (pCi/L)	52	31.0	+/-7	-17.0*	+/-8.1	3.79	1.15	0.00380	4.99E-02
Thorium-228 (pCi/L)	52	2.9	+/-.86	-0.62*	+/-.17	0.077	0.0644	0.019	1.0E-03
Thorium-230 (pCi/L)	52	34.0	+/-5.5	-0.75*	+/-.19	0.90	0.66	0.30	1.2E-02
Thorium-232 (pCi/L)	52	0.55	+/-.4	-0.15*	+/-.24	0.013	0.013	0.026	1.7E-04
Thorium-234 (pCi/L)	52	11.0	+/-1.4	0.11*	+/-.13	3.5	0.35	0.035	4.6E-02
Tritium (pCi/L)	52	660.0*	+/-500	-840.0*	+/-380	7.754	47.60	0.0004000	1.020E-01
Uranium-234 (pCi/L)	52	2.6	+/-.53	0.72	+/-.34	1.4	0.070	0.28	1.9E-02
Uranium-235 (pCi/L)	52	0.31	+/-.18	-0.09*	+/-.085	0.06	0.01	0.01	8E-04
Uranium-236 (pCi/L)	52	0.11*	+/-.13	-0.061*	+/-.068	0.026	0.0053	0.0053	3.5E-04
Uranium-238 (pCi/L)	52	11.0	+/-1.4	0.89	+/-.34	3.6	0.34	0.59	4.7E-02

(e) Not applicable

* Provisional Result

1

Table 4.31. Y-12 Plant Discharge Point STA304, STATION 304, BEAR CREEK AT HIGHWAY 95.

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration					Standard	Percentage of DCG	Total Curies
		Max	+/-	Min	+/-	Average			
Alpha activity (pCi/L)	12	16.0	+/-4.8	6.2	+/-3.2	10.	0.96	e	1.6E-01
Americium-241 (pCi/L)	12	0.22	+/-.23	-0.36*	+/-.2	0.047	0.044	0.16	7.2E-04
Beta activity (pCi/L)	12	23.0	+/-5.8	5.9*	+/-4.3	15	1.5	e	2.2E-01
Cobalt-60 (pCi/L)	12	2.5*	+/-2.4	-1.1*	+/-2.1	0.58	0.33	0.012	8.7E-03
Cesium-137 (pCi/L)	12	2.4*	+/-2.3	-2.1*	+/-2.1	0.28	0.38	0.0093	4.2E-03
Gamma Activity (pCi/L)	12	11.0*	+/-16	-16.0*	+/-18	1.34	2.69	e	2.03E-02
Neptunium-237 (pCi/L)	12	0.65	+/-.24	-0.096*	+/-.12	0.040	0.058	0.13	6.0E-04
Plutonium-238 (pCi/L)	12	0.29*	+/-.21	-0.29*	+/-.1	0.039	0.046	0.098	5.9E-04
Plutonium-239/240 (pCi/L)	12	0.1*	+/-.12	-0.24*	+/-.11	-0.028	0.029	-0.092	-4.2E-04
Radium-226 (pCi/L)	12	0.85	+/-1.1	-0.079*	+/-.34	0.25	0.076	0.25	3.8E-03
Radium-228 (pCi/L)	12	1.4*	+/-1.3	-4.9*	+/-15	-0.019	0.47	-0.019	-2.9E-04
Strontium-89/90 (pCi/L)	12	1.3*	+/-2.2	-1.6*	+/-2.2	0.38	0.24	0.038	5.8E-03
Total Radium Alpha (pCi/L)	12	0.44	+/-.28	0.054*	+/-.12	0.26	0.036	e	4.0E-03
Technetium-99 (pCi/L)	12	36.0	+/-7.1	-8.8*	+/-9.6	13	3.9	0.013	1.9E-01
Thorium-228 (pCi/L)	12	1.4	+/-.46	-0.59*	+/-.18	-0.0016	0.14	-0.00040	-2.4E-05
Thorium-230 (pCi/L)	12	2.8	+/-.8	-0.25*	+/-.24	0.40	0.28	0.13	6.1E-03
Thorium-232 (pCi/L)	12	0.17*	+/-.16	-0.07*	+/-.14	0.02	0.02	0.04	3E-04
Thorium-234 (pCi/L)	12	8.7	+/-1.3	3.2	+/-.58	5.9	0.43	0.059	9.0E-02
Tritium (pCi/L)	12	360.0*	+/-740	-230.0*	+/-480	89.42	51.71	0.004500	1.350E+00
Uranium-234 (pCi/L)	12	4.3	+/-.79	1.3	+/-.37	2.7	0.26	0.53	4.0E-02
Uranium-235 (pCi/L)	12	0.43	+/-.22	-0.041*	+/-.091	0.13	0.035	0.022	2.0E-03
Uranium-236 (pCi/L)	12	0.099*	+/-.11	0.0*	+/-0	0.05	0.008	0.009	7E-04
Uranium-238 (pCi/L)	12	8.7	+/-1.3	3.2	+/-.58	5.9	0.43	0.99	9.0E-02

(e) Not applicable

* Provisional Result

1

Table 4.32. Y-12 Plant Discharge Point STA304, STATION 304, BEAR CREEK AT HIGHWAY 95.

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Flow, mgd	367	187.066	1.206	10.93	d	d
pH, Std Unit	24	7.6	7.2	d	9/ 6(e)	0
Silver	12	<0.02	<0.02	<0.02	0.0041	0
Aluminum	12	8.96	<0.2	<1	d	d
Arsenic	12	<0.2	<0.2	<0.2	0.0014	0
Boron	12	<0.1	<0.1	<0.1	d	d
Barium	12	0.0906	0.0455	0.0639	d	d
Beryllium	12	<0.0005	<0.0005	<0.0005	0.0013	0
Calcium	12	55.5	25.4	41.8	d	d
Cadmium	12	<0.01	<0.01	<0.01	0.0039	0
Chloride	12	9.46	4.22	6.79	d	d
Cobalt	12	<0.02	<0.02	<0.02	d	d
Chromium	12	<0.02	<0.02	<0.02	0.016	0
Copper	12	<0.02	<0.02	<0.02	0.0177	0
Iron	12	6.38	0.109	0.923	d	d
Mercury	12	0.0003	<0.0002	<0.0002	0.00015	0
Potassium	12	3.12	<2.0	<2.1	d	d
Lithium	12	0.0181	<0.01	<0.01	d	d
Magnesium	12	17.0	6.45	12.2	d	d
Manganese	12	0.413	0.02	0.1	d	d
Molybdenum	12	<0.05	<0.05	<0.05	d	d
Sodium	12	5.99	2.88	4.39	d	d
Nickel	12	<0.05	<0.05	<0.05	1.418	0
Nitrite as Nitrogen	12	<0.15	0.0152	<0.077	d	d
Nitrate as Nitrogen	12	3.49	1.11	2.14	d	d
Lead	12	<0.1	<0.1	<0.1	0.0817	0
Phenols - Total Recoverable	12	0.0058	<0.005	<0.005	d	d

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

1

Table 4.33. Y-12 Plant Discharge Point STA304, STATION 304, BEAR CREEK AT HIGHWAY 95.

From: 2004/01/01 To: 2004/12/31

Parameter	Number of Samples	Concentration Max	Concentration Min	Concentration Avg	Reference Value(b)	Number of Values Exceeding Reference
Antimony	12	<0.2	<0.2	<0.2	4.31	0
Selenium	12	<0.2	<0.2	<0.2	0.02	0
Strontium	12	0.0973	0.049	0.073	d	d
Sulfate	12	12.2	7.01	9.53	d	d
Suspended Solids	12	147.0	<1.0	<16.	d	d
Thorium	12	<0.2	<0.2	<0.2	d	d
Titanium	12	0.237	<0.05	<0.07	d	d
Thallium	12	<0.2	<0.2	<0.2	0.0063	0
Uranium	12	0.028	0.011	0.020	d	d
Vanadium	12	<0.02	<0.02	<0.02	d	d
Zinc	12	<0.05	<0.05	<0.05	0.117	0
Zirconium	12	<0.2	<0.2	<0.2	d	d

(a) Units in mg/L unless otherwise indicated.
(b) NPDES permit limits.
(c) Flow during operations and/or discharging.
(d) Not applicable.
(e) Maximum value/minimum value.

2

Table 4.34. Storm Water Data Above Screening Levels

Location (Outfall) *020*

Parameter	*Taken Date*	*Result*	*Result Units*	*Screening Level*	*Units*	*Rationale*
PCB	3/30/2004 6:42:00 AM	.0016	mg/L	0.00044	µg/L	TN Water Quality Criteria/Recreation
Zinc	3/30/2004 2:05:00 AM	.473	mg/L	0.117	mg/L	TN Water Quality Criteria/Fish and Aquatic Life
Zinc	3/30/2004 6:42:00 AM	.17	mg/L	0.117	mg/L	TN Water Quality Criteria/Fish and Aquatic Life

Location (Outfall) *033*

Parameter	*Taken Date*	*Result*	*Result Units*	*Screening Level*	*Units*	*Rationale*
Fecal Coliform Bacteria	5/2/2004 8:05:00 AM	53000.	col/100ml	1000	col/100mL	TN Water Quality Criteria/Recreation
Mercury	5/2/2004 11:20:00 AM	.000277	mg/L	0.000051	mg/L	TN Water Quality Criteria/Recreation
Phosphorus	5/2/2004 11:20:00 AM	.149	mg/L	0.1	mg/L	EPA Ambient Water Quality Criteria Guideline

Location (Outfall) *102*

Parameter	*Taken Date*	*Result*	*Result Units*	*Screening Level*	*Units*	*Rationale*
Fecal Coliform Bacteria	5/2/2004 7:45:00 AM	2100.	col/100ml	1000	col/100mL	TN Water Quality Criteria/Recreation
Zinc	5/2/2004 7:45:00 AM	.124	mg/L	0.117	mg/L	TN Water Quality Criteria/Fish and Aquatic Life
Zinc	5/2/2004 10:10:00 AM	.18	mg/L	0.117	mg/L	TN Water Quality Criteria/Fish and Aquatic Life

Table 4.34 (continued)

Location (Outfall) *135*

Parameter	*Taken Date*	*Result*	*Result Units*	*Screening Level*	*Units*	*Rationale*
Copper	9/7/2004 11:30:00 AM	.0417	mg/L	0.0177	mg/L	TN Water Quality Criteria/Fish and Aquatic Life
Copper	9/7/2004 2:35:00 PM	.0267	mg/L	0.0177	mg/L	TN Water Quality Criteria/Fish and Aquatic Life
Mercury	9/7/2004 11:30:00 AM	.000223	mg/L	0.000051	mg/L	TN Water Quality Criteria/Recreation
Phosphorus	9/7/2004 2:35:00 PM	.221	mg/L	0.1	mg/L	EPA Ambient Water Quality Criteria Guideline
Zinc	9/7/2004 2:35:00 PM	.287	mg/L	0.117	mg/L	TN Water Quality Criteria/Fish and Aquatic Life
Zinc	9/7/2004 11:30:00 AM	.495	mg/L	0.117	mg/L	TN Water Quality Criteria/Fish and Aquatic Life

Location (Outfall) *S14*

Parameter	*Taken Date*	*Result*	*Result Units*	*Screening Level*	*Units*	*Rationale*
Alpha activity	5/2/2004 10:18:00 AM	100.	pCi/L	15	pCi/L	SDWA MCL 40 CFR 141.15
Fecal Coliform Bacteria	5/2/2004 8:35:00 AM	2700.	col/100ml	1000	col/100mL	TN Water Quality Criteria/Recreation
Iron	5/2/2004 10:18:00 AM	14.	mg/L	10	mg/L	TN Rule Chapter 1200-4-5-.03(2)
Manganese	5/2/2004 8:35:00 AM	.574	mg/L	0.5	mg/L	NPDES Permit, Part III-A (Toxic Pollutants)
Manganese	5/2/2004 10:18:00 AM	1.47	mg/L	0.5	mg/L	NPDES Permit, Part III-A (Toxic Pollutants)
PCB	5/2/2004 8:35:00 AM	.0044	mg/L	0.00044	µg/L	TN Water Quality Criteria/Recreation
PCB	3/30/2004 2:35:00 AM	.00012	mg/L	0.00044	µg/L	TN Water Quality Criteria/Recreation
PCB	5/2/2004 10:18:00 AM	.0064	mg/L	0.00044	µg/L	TN Water Quality Criteria/Recreation
Phosphorus	5/2/2004 10:18:00 AM	.225	mg/L	0.1	mg/L	EPA Ambient Water Quality Criteria Guideline
Total Suspended Solids	5/2/2004 10:18:00 AM	288.	mg/L	60	mg/L	Effluent Guideline 40 CFR 433
Total Suspended Solids	5/2/2004 8:35:00 AM	110.	mg/L	60	mg/L	Effluent Guideline 40 CFR 43
Uranium-238	5/2/2004 10:18:00 AM	69.	pCi/L	30	pCi/L	5% Derived Concentration Guideline

Table 4.35. REGIME=Bear Creek—AREA NAME=Above Grade Low-Level Storage Facility

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	5.38	4.4	4.89	250		0
Sulfate	(mg/L)		2	2	19.3	17.4	18.35	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.0668	0.0664	0.0666	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	86.8	85.7	86.25	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	1	0.112	0.112	0.112	0.3		0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	4.56	3.74	4.15	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.295	0.0293	0.16215	0.05		1
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	3.93	3.78	3.855	NR		NA
Sodium, ICAP	(mg/L)		2	2	2.35	2.02	2.185	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.157	0.149	0.153	NR		NA
Sulfur, ICAP	(mg/L)		2	2	6.87	5.62	6.245	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		2	1	0.000601	0.000601	0.000601	0.03		0
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Static Water Level	(ft – toc)		4	NA	7.05	-7.05	0	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	224	204	214	NR		NA
Conductivity	(umho/cm)		2	2	498	470	484	NR		NA
Dissolved Solids	(mg/L)		2	2	287	259	273	500		0
pH	(pH)		2	2	7.4	7	7.2	6.5/8.5		0
Turbidity	(NTU)		2	2	0.617	0.282	0.4495	1		0

Table 4.36. REGIME=Bear Creek—AREA NAME=Bear Creek Burial Grounds Waste Management Area

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		2	2	62.2	53.9	58.05	NR		NA
Chloride	(mg/L)		18	18	301	1.02	59.95778	250		2
Fluoride	(mg/L)		18	11	31.6	0.112	5.172455	4		5
Nitrate Nitrogen	(mg/L)		16	8	2980	0.129	729.5903	10		2
Nitrate/Nitrite	(mg/L)		1	1	0.96	0.96	0.96	NR		NA
Sulfate	(mg/L)		18	18	24	1.51	10.035	250		0
Aluminum, ICAP	(mg/L)		16	7	85.8	0.25	22.372	0.2		7
Antimony, ICAP	(mg/L)		16	16	4	0.2	0.55	0.006		16
Arsenic, PMS	(mg/L)		16	2	0.00913	0.009	0.009065	0.05		0
Arsenic, ICAP	(mg/L)		16	16	4	0.2	0.55	0.05		16
Barium, ICAP	(mg/L)		16	16	10.8	0.0339	1.139344	2		2
Beryllium, ICAP	(mg/L)		16	2	0.0418	0.0348	0.0383	0.004		2
Boron, ICAP	(mg/L)		16	6	13.8	0.496	4.703167	NR		NA
Cadmium, PMS	(mg/L)		16	2	0.49	0.37	0.43	0.005		2
Cadmium, ICAP	(mg/L)		16	16	0.482	0.01	0.061438	0.005		16
Calcium, ICAP	(mg/L)		16	16	2840	1.25	392.4144	NR		NA
Chromium, PMS	(mg/L)		16	5	0.0601	0.0102	0.02778	NR		NA
Chromium, ICAP	(mg/L)		16	16	0.4	0.02	0.056781	0.1		2
Cobalt, ICAP	(mg/L)		16	2	0.639	0.494	0.5665	NR		NA
Copper, ICAP	(mg/L)		16	1	0.0231	0.0231	0.0231	1.3		0
Iron, ICAP	(mg/L)		16	9	3.69	0.0547	0.601378	0.3		3
Lead, PMS	(mg/L)		16	9	0.0156	0.000591	0.003182	0.015	c	1
Lead, ICAP	(mg/L)		16	16	2	0.1	0.275	0.015	c	16
Lithium, ICAP	(mg/L)		16	8	0.714	0.0287	0.238525	NR		NA
Magnesium, ICAP	(mg/L)		16	14	624	0.24	93.65636	NR		NA
Manganese, ICAP	(mg/L)		16	7	129	0.00853	33.36319	0.05		4
Mercury, CVAA	(mg/L)		16	2	0.00226	0.00156	0.00191	0.002		1
Nickel, PMS	(mg/L)		16	5	6.36	0.00675	2.15165	NR		NA
Nickel, ICAP	(mg/L)		16	16	5.94	0.05	0.710875	0.1	d	3
Niobium, ICAP	(mg/L)		16	16	4	0.2	0.55	NR		NA

Table 4.36 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Phosphorus, ICAP	(mg/L)		16	16	10		0.5	1.375	NR		NA
Potassium, ICAP	(mg/L)		16	4	34.1		2.02	10.1825	NR		NA
Selenium, PMS	(mg/L)		16	1	0.0434		0.0434	0.0434	0.05		0
Selenium, ICAP	(mg/L)		16	16	4		0.2	0.55	0.05		16
Silicon, ICAP	(mg/L)		16	15	12.3		2.28	7.358667	NR		NA
Sodium, ICAP	(mg/L)		16	16	526		2.1	151.8131	NR		NA
Strontium, ICAP	(mg/L)		16	16	11.1		0.0177	1.458306	NR		NA
Sulfur, ICAP	(mg/L)		16	16	10		0.5	4.07075	NR		NA
Thallium, PMS	(mg/L)		16	2	0.000599		0.000542	0.000571	0.002		0
Thallium, ICAP	(mg/L)		16	16	4		0.2	0.55	NR		NA
Titanium, ICAP	(mg/L)		16	16	1		0.05	0.1375	NR		NA
Uranium, PMS	(mg/L)		16	4	0.595		0.0262	0.314725	0.03		3
Uranium, ICAP	(mg/L)		16	16	40		2	5.5	NR		NA
m,p-Xylene, X-10 lab	(µg/L)		2	2	10		10	10	NR		NA
Zirconium, ICAP	(mg/L)		16	16	4		0.2	0.55	NR		NA
Static Water Level	(ft - toc)		42	NA	28.91		-28.91	2.817381	NR		NA
Alkalinity as CO3	(mg/L)		16	4	758		88.8	417	NR		NA
Alkalinity as HCO3	(mg/L)		16	15	481		2	159.0133	NR		NA
Conductivity	(umho/cm)		16	16	19700		36	2998.938	NR		NA
Dissolved Solids	(mg/L)		25	25	19100		32	1767.96	500		8
pH	(pH)		16	16	11.23		4.63	6.979375	6.5/8.5		13
Total Suspended Solids	(mg/L)		25	12	177	R	1	22.1	NR		NA
Turbidity	(NTU)		16	16	19.4		0.191	3.080938	1		7
Uranium-233/234	(pCi/L)		2	2	0.83		0.49	0.66	NR		NA
Uranium-234	(pCi/L)		4	4	87		4.9	44.825	20		2
Uranium-235	(pCi/L)		6	4	4.8		0.31	2.54	24		0
Uranium-236	(pCi/L)		6	1	2.6		2.6	2.6	NR		NA
Uranium-238	(pCi/L)		6	5	210		0.41	84.882	24		2
Technetium-99	(pCi/L)		6	4	33000		19	14759.5	4000		2
Gross Alpha	(pCi/L)		18	4	430		0.93	115.9825	15	e	3
Gross Beta	(pCi/L)		18	7	24000		5.42	4838.617	50	a	2
Radium - Total Alpha	(pCi/L)		1	1	0.56		0.56	0.56	5	f	0

Table 4.36 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
1,1,1-Trichloroethane	(µg/L)		26	4	240		22		101.75	200		1
1,1-Dichloroethane	(µg/L)		26	10	2000		2	J	469.7	NR		NA
1,1-Dichloroethene	(µg/L)		26	10	110		1	J	39.1	7		6
1,2-Dichloroethane	(µg/L)		26	2	6		5		5.5	5		1
1,2-Dichloroethene (Total)	(µg/L)		16	8	560		20		158.5	NR	b	NA
1,2-Dimethylbenzene	(µg/L)		2	2	3		3		3	NR		NA
Acetone	(µg/L)		26	1	4	J	4	J	4	NR		NA
Benzene	(µg/L)		26	5	1100		1	J	407.4	5		4
Carbon tetrachloride	(µg/L)		26	1	3	J	3	J	3	5		0
Chloroethane	(µg/L)		26	7	32		1	J	17.14286	NR		NA
Chloroform	(µg/L)		26	4	39		8		21.5	100	g	0
cis-1,2-Dichloroethene	(µg/L)		26	10	4900		17		1005.2	70		4
Dichlorodifluoromethane	(µg/L)		16	2	10		2	J	6	NR		NA
Ethylbenzene	(µg/L)		26	2	4	J	3	J	3.5	700		0
Methylene chloride	(µg/L)		26	2	21		14		17.5	5		2
Tetrachloroethene	(µg/L)		26	12	2100		2	J	552	5		10
Toluene	(µg/L)		26	2	18		12		15	1000		0
trans-1,2-Dichloroethene	(µg/L)		26	6	34		3	J	13	100		0
Trichloroethene	(µg/L)		26	9	1700		1	J	410.3333	5		6
Vinyl chloride	(µg/L)		26	8	610		2	J	174	2		7
Xylenes	(µg/L)		26	4	13		4	J	9.25	10000		0

Table 4.37. REGIME=Bear Creek—AREA NAME=Environmental Management Waste Management Facility (EMWMF)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Ammonia as Nitrogen	(mg/L)		8	1	1		1		1	NR		NA
Static Water Level	(ft - toc)		50	NA	32.77		4.15		10.1382	NR		NA
Biochemical Oxygen Demand	(mg/L)		8	7	4		1		2.285714	NR		NA
Oil and Grease	(mg/L)		4	1	1.8		1.8		1.8	NR		NA
pH	(pH)		8	8	7.8		6.7		7.4	6.5/8.5		0
Total Suspended Solids	(mg/L)		8	8	218		7.6		61.575	NR		NA
Iodine-129	(pCi/L)		65	20	22.31		0.63		4.098	NR		NA
Radium-226	(pCi/L)		65	30	0.53		0.05 J	J	0.172667	5	f	0
Radium-228	(pCi/L)		65	46	2.94		0.3		0.885652	5	f	0
Thorium-228	(pCi/L)		65	11	0.69		0.11		0.269091	16		0
Thorium-230	(pCi/L)		65	64	1.95		0.16		0.61625	12		0
Thorium-232	(pCi/L)		65	49	1.1	Q	0.08		0.305306	2		0
Uranium-233/234	(pCi/L)		65	65	1.78		0.14		0.656308	NR		NA
Uranium-235/236	(pCi/L)		65	52	1.19		0.06		0.367115	NR		NA
Neptunium-237	(pCi/L)		65	5	0.23		0.09		0.166	1.2		0
Uranium-238	(pCi/L)		65	59	2.46	Q	0.06		0.424915	24		0
Americium-241	(pCi/L)		65	7	0.2		0.07		0.121429	1.2		0
Technetium-99	(pCi/L)		65	1	5.55		5.55		5.55	4000		0
Gross Alpha	(pCi/L)		8	6	14.67		1.7		4.703333	15	e	0
Gross Beta	(pCi/L)		8	6	28.22		2.91		9.651667	50	a	0
Tritium	(pCi/L)		65	8	1997.34		355.02		791.2025	20000		0
Acetone	(µg/L)		64	1	2	J	2	J	2	NR		NA
Chloroform	(µg/L)		64	1	0.1	J	0.1	J	0.1	100	g	0
Di-n butyl phthalate	(µg/L)		64	8	1		0.5	J	0.7125	NR		NA
Tetrachloroethene	(µg/L)		64	1	0.1	J	0.1	J	0.1	5		0
Toluene	(µg/L)		64	5	0.3	J	0.1	J	0.18	1000		0
Trichloroethene	(µg/L)		64	4	0.4	J	0.1	J	0.225	5		0

Table 4.38. REGIME=Bear Creek—AREA NAME=Exit Pathway Monitoring Location A

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		4	4	223		173		197	NR		NA
Chloride	(mg/L)		4	4	10		2.7		5.525	250		0
Fluoride	(mg/L)		4	2	0.15		0.11		0.13	4		0
Nitrate/Nitrite	(mg/L)		4	4	1.7		0.8		1.2675	NR		NA
Sulfate	(mg/L)		4	4	19.3		5.1		12.375	250		0
Aluminum, ICAP	(mg/L)		1	1	1.26		1.26		1.26	0.2		1
Antimony, ICAP	(mg/L)		1	1	0.2		0.2		0.2	0.006		1
Arsenic, ICAP	(mg/L)		1	1	0.2		0.2		0.2	0.05		1
Barium, ICAP	(mg/L)		1	1	0.0932		0.0932		0.0932	2		0
Cadmium, PMS	(mg/L)		1	1	0.0152	Q	0.0152	Q	0.0152	0.005		1
Cadmium, ICAP	(mg/L)		1	1	0.0157		0.0157		0.0157	0.005		1
Calcium, ICAP	(mg/L)		1	1	91.7		91.7		91.7	NR		NA
Chromium, PMS	(mg/L)		1	1	0.714		0.714		0.714	NR		NA
Chromium, ICAP	(mg/L)		1	1	0.788		0.788		0.788	0.1		1
Copper, ICAP	(mg/L)		1	1	0.0269		0.0269		0.0269	1.3		0
Iron, ICAP	(mg/L)		1	1	5.03		5.03		5.03	0.3		1
Iron Related Bacteria	(cfu/ml)		1	1	100	J	100	J	100	NR		NA
Lead, PMS	(mg/L)		1	1	0.0157		0.0157		0.0157	0.015	c	1
Lead, ICAP	(mg/L)		1	1	0.1		0.1		0.1	0.015	c	1
Magnesium, ICAP	(mg/L)		1	1	19.5		19.5		19.5	NR		NA
Manganese, ICAP	(mg/L)		1	1	0.523		0.523		0.523	0.05		1
Nickel, PMS	(mg/L)		1	1	0.361		0.361		0.361	NR		NA
Nickel, ICAP	(mg/L)		1	1	0.381		0.381		0.381	0.1	d	1
Niobium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	NR		NA
Phosphorus, ICAP	(mg/L)		1	1	0.5		0.5		0.5	NR		NA
Selenium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	0.05		1
Silicon, ICAP	(mg/L)		1	1	5.46		5.46		5.46	NR		NA
Slime Forming Bacteria	(cfu/ml)		1	1	50000		50000		50000	NR		NA
Sodium, ICAP	(mg/L)		1	1	43.9		43.9		43.9	NR		NA
Strontium, ICAP	(mg/L)		1	1	0.15		0.15		0.15	NR		NA
Sulfate Reducing Bacteria	(cfu/ml)		1	1	1000	J	1000	J	1000	NR		NA

Table 4.38 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Sulfur, ICAP	(mg/L)		1	1	7.63	7.63	7.63	NR		NA
Thallium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		1	1	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		1	1	0.00322	0.00322	0.00322	0.03		0
Uranium, ICAP	(mg/L)		1	1	2	2	2	NR		NA
Zinc, ICAP	(mg/L)		1	1	0.0924	0.0924	0.0924	5		0
Zirconium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		6	NA	88.98	-7.34	34.70333	NR		NA
Conductivity	(umho/cm)		1	1	543	543	543	NR		NA
Dissolved Solids	(mg/L)		4	4	306	245	273.5	500		0
pH	(pH)		1	1	6.97	6.97	6.97	6.5/8.5		0
Total Suspended Solids	(mg/L)		4	3	46.4	13.7	32.76667	NR		NA
Uranium-233/234	(pCi/L)		4	4	5.33	2.52	3.655	NR		NA
Uranium-235	(pCi/L)		4	2	0.6	0.55	0.575	24		0
Uranium-236	(pCi/L)		4	1	0.33	0.33	0.33	NR		NA
Uranium-238	(pCi/L)		4	4	6.62	3.35	4.92	24		0
Technetium-99	(pCi/L)		4	2	11.03	10.5	10.765	4000		0
Gross Alpha	(pCi/L)		4	4	14.54	7.9	11.4025	15	e	0
Gross Beta	(pCi/L)		4	4	19.39	7.67	15.37	50	a	0

Table 4.39. REGIME=Bear Creek—AREA NAME=Exit Pathway Monitoring Location B

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		8	8	41	12.7	24.4625	250		0
Fluoride	(mg/L)		8	8	0.276	0.108	0.183375	4		0
Nitrate Nitrogen	(mg/L)		8	8	27.4	0.0429	16.17911	10		6
Sulfate	(mg/L)		8	8	27.9	11.2	20.9125	250		0
Aluminum, ICAP	(mg/L)		8	1	0.23	0.23	0.23	0.2		1
Antimony, ICAP	(mg/L)		8	8	0.2	0.2	0.2	0.006		8
Arsenic, ICAP	(mg/L)		8	8	0.2	0.2	0.2	0.05		8
Barium, ICAP	(mg/L)		8	8	0.153	0.0215	0.09235	2		0
Cadmium, ICAP	(mg/L)		8	8	0.01	0.01	0.01	0.005		8
Calcium, ICAP	(mg/L)		8	8	105	6.65	70.53125	NR		NA
Chromium, ICAP	(mg/L)		8	8	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		8	7	1.17	0.408	0.625571	0.3		7
Lead, PMS	(mg/L)		8	2	0.000832	0.000827	0.00083	0.015	c	0
Lead, ICAP	(mg/L)		8	8	0.1	0.1	0.1	0.015	c	8
Lithium, ICAP	(mg/L)		8	6	0.025	0.0128	0.01805	NR		NA
Magnesium, ICAP	(mg/L)		8	8	32.3	19.9	25.9125	NR		NA
Manganese, ICAP	(mg/L)		8	5	0.0264	0.00511	0.013552	0.05		0
Nickel, PMS	(mg/L)		8	4	0.00644	0.00531	0.00582	NR		NA
Nickel, ICAP	(mg/L)		8	8	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		8	8	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		8	8	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		8	7	11	2.31	5.402857	NR		NA
Selenium, ICAP	(mg/L)		8	8	0.2	0.2	0.2	0.05		8
Silicon, ICAP	(mg/L)		8	8	4.85	0.74	4.06125	NR		NA
Sodium, ICAP	(mg/L)		8	8	19.5	6.6	12.94	NR		NA
Strontium, ICAP	(mg/L)		8	8	0.361	0.0287	0.212013	NR		NA
Sulfur, ICAP	(mg/L)		8	8	9.21	3.92	7.12125	NR		NA
Thallium, PMS	(mg/L)		8	2	0.00071	0.000588	0.000649	0.002		0
Thallium, ICAP	(mg/L)		8	8	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		8	8	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		8	8	0.0773	0.000724	0.025561	0.03		2

Table 4.39 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Uranium, ICAP	(mg/L)		8	8	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		8	8	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		16	NA	43.58		-43.58		0	NR		NA
Alkalinity as HCO3	(mg/L)		8	8	220		105		193.375	NR		NA
Conductivity	(umho/cm)		8	8	2480		535		949.125	NR		NA
Dissolved Solids	(mg/L)		8	8	553		175		367.75	500		1
pH	(pH)		8	8	8.74		7.14		7.60625	6.5/8.5		1
Total Suspended Solids	(mg/L)		8	1	3		3		3	NR		NA
Turbidity	(NTU)		8	8	5.45		0.408		3.1835	1		7
Gross Alpha	(pCi/L)		8	5	37		3.8		15.46	15	e	2
Gross Beta	(pCi/L)		8	7	98		30		57.57143	50	a	4
1,1-Dichloroethene	(µg/L)		8	1	4	J	4	J	4	7		0
1,2-Dichloroethene (Total)	(µg/L)		8	8	7		1	J	3.25	NR	b	NA
cis-1,2-Dichloroethene	(µg/L)		8	8	7		1	J	3.25	70		0
Trichloroethene	(µg/L)		8	8	37		5		13.375	5		6

Table 4.40. REGIME=Bear Creek—AREA NAME=Exit Pathway Monitoring Location C

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		8	8	96	6.41	45.23875	250		0
Fluoride	(mg/L)		8	6	0.25	0.106	0.198333	4		0
Nitrate Nitrogen	(mg/L)		8	8	56	2	16.62625	10		4
Sulfate	(mg/L)		8	8	38.8	11.8	27.075	250		0
Antimony, ICAP	(mg/L)		8	8	0.2	0.2	0.2	0.006		8
Arsenic, ICAP	(mg/L)		8	8	0.2	0.2	0.2	0.05		8
Barium, ICAP	(mg/L)		8	8	0.31	0.0513	0.146913	2		0
Cadmium, ICAP	(mg/L)		8	8	0.01	0.01	0.01	0.005		8
Calcium, ICAP	(mg/L)		8	8	173	63.3	109.625	NR		NA
Chromium, ICAP	(mg/L)		8	8	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		8	7	4.29	0.0534	0.973214	0.3		5
Lead, PMS	(mg/L)		8	1	0.000773	0.000773	0.000773	0.015	c	0
Lead, ICAP	(mg/L)		8	8	0.1	0.1	0.1	0.015	c	8
Lithium, ICAP	(mg/L)		8	4	0.0196	0.0154	0.01745	NR		NA
Magnesium, ICAP	(mg/L)		8	8	40.9	21.9	32.0125	NR		NA
Manganese, ICAP	(mg/L)		8	4	0.741	0.00984	0.23336	0.05		3
Nickel, PMS	(mg/L)		8	2	0.00812	0.00731	0.007715	NR		NA
Nickel, ICAP	(mg/L)		8	8	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		8	8	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		8	8	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		8	6	3.22	2.3	2.703333	NR		NA
Selenium, ICAP	(mg/L)		8	8	0.2	0.2	0.2	0.05		8
Silicon, ICAP	(mg/L)		8	8	6.19	4.75	5.66875	NR		NA
Sodium, ICAP	(mg/L)		8	8	30.7	1.86	16.7575	NR		NA
Strontium, ICAP	(mg/L)		8	8	1.28	0.0542	0.52385	NR		NA
Sulfur, ICAP	(mg/L)		8	8	13.5	3.95	9.29625	NR		NA
Thallium, PMS	(mg/L)		8	3	0.000846	0.00059	0.000678	0.002		0
Thallium, ICAP	(mg/L)		8	8	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		8	8	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		8	6	0.012	0.000605	0.003712	0.03		0
Uranium, ICAP	(mg/L)		8	8	2	2	2	NR		NA

Table 4.40 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Zirconium, ICAP	(mg/L)		8	8	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		16	NA	72.87		-72.87		0	NR		NA
Alkalinity as HCO3	(mg/L)		8	8	328		221		276.625	NR		NA
Conductivity	(umho/cm)		8	8	1303		556		858.875	NR		NA
Dissolved Solids	(mg/L)		8	8	754		300		490.5	500		4
pH	(pH)		8	8	7.35		6.69		7.10625	6.5/8.5		0
Total Suspended Solids	(mg/L)		8	1	5		5		5	NR		NA
Turbidity	(NTU)		8	8	9.8		0.268		2.61225	1		5
Gross Alpha	(pCi/L)		8	1	4.7		4.7		4.7	15	e	0
Gross Beta	(pCi/L)		8	7	35		11		22.42857	50	a	0
1,1,1-Trichloroethane	(µg/L)		8	1	4	J	4	J	4	200		0
1,1-Dichloroethene	(µg/L)		8	2	8		1	J	4.5	7		1
1,2-Dichloroethene (Total)	(µg/L)		8	6	4	J	1	J	2.5	NR	b	NA
Carbon tetrachloride	(µg/L)		8	2	12		2	J	7	5		1
Chloroform	(µg/L)		8	2	3	J	3	J	3	100	g	0
cis-1,2-Dichloroethene	(µg/L)		8	6	4	J	1	J	2.5	70		0
Tetrachloroethene	(µg/L)		8	3	4	J	1	J	3	5		0
Trichloroethene	(µg/L)		8	8	310		7		78.75	5		8

Table 4.41. REGIME=Bear Creek—AREA NAME=Exit Pathway Monitoring Location W

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		7	7	192	168	182.7143	NR		NA
Chloride	(mg/L)		9	9	108	8.3	34.51111	250		0
Fluoride	(mg/L)		9	6	0.54	0.26	0.383333	4		0
Nitrate/Nitrite	(mg/L)		7	3	1.1	0.67	0.85	NR		NA
Sulfate	(mg/L)		9	9	95.4	14	55.54444	250		0
Aluminum, ICAP	(mg/L)		2	1	0.785	0.785	0.785	0.2		1
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, PMS	(mg/L)		2	1	0.00789	0.00789	0.00789	0.05		0
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.704	0.697	0.7005	2		0
Boron, ICAP	(mg/L)		2	2	0.198	0.19	0.194	NR		NA
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	235	226	230.5	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	2	0.218	0.136	0.177	0.3		0
Lead, PMS	(mg/L)		2	2	0.00888	0.00701	0.007945	0.015	c	0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.0403	0.0362	0.03825	NR		NA
Magnesium, ICAP	(mg/L)		2	2	28.3	28	28.15	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.914	0.881	0.8975	0.05		2
Nickel, PMS	(mg/L)		2	2	0.0564	0.0416	0.049	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.0568	0.0506	0.0537	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	4.99	4.76	4.875	NR		NA
Selenium, PMS	(mg/L)		2	1	0.0297	0.0297	0.0297	0.05		0
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	11.3	11	11.15	NR		NA
Sodium, ICAP	(mg/L)		2	2	29.2	28.6	28.9	NR		NA
Strontium, ICAP	(mg/L)		2	2	1.04	0.993	1.0165	NR		NA
Sulfur, ICAP	(mg/L)		2	2	9.3	7.77	8.535	NR		NA

Table 4.41 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Thallium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		2	2	0.00186		0.00156		0.00171	0.03		0
Uranium, ICAP	(mg/L)		2	2	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		11	NA	37.62		-14.54		20.41	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	548		424		486	NR		NA
Conductivity	(umho/cm)		2	2	1446		1370		1408	NR		NA
Dissolved Solids	(mg/L)		6	6	799		249		456.1667	500		2
pH	(pH)		2	2	6.51		6.48		6.495	6.5/8.5		1
Total Suspended Solids	(mg/L)		6	2	22		8		15	NR		NA
Turbidity	(NTU)		2	2	2.9		1.16		2.03	1		2
Uranium-233/234	(pCi/L)		7	7	2.42		0.55		1.328571	NR		NA
Uranium-235	(pCi/L)		7	2	0.44		0.42		0.43	24		0
Uranium-236	(pCi/L)		7	2	0.44		0.38		0.41	NR		NA
Uranium-238	(pCi/L)		7	6	1.44		0.39		0.876667	24		0
Americium-241	(pCi/L)		4	2	0.14		0.08		0.11	1.2		0
Technetium-99	(pCi/L)		7	1	6.62		6.62		6.62	4000		0
Gross Alpha	(pCi/L)		9	5	2.6		0.87		1.802	15	e	0
Gross Beta	(pCi/L)		9	5	5.29		2.43		3.96	50	a	0
Radium - Total Alpha	(pCi/L)		4	4	1.57		0.5		0.8525	5	f	0
1,1-Dichloroethane	(µg/L)		9	1	2	J	2	J	2	NR		NA
1,1-Dichloroethene	(µg/L)		9	2	6		2	J	4	7		0
1,2-Dichloroethene (Total)	(µg/L)		2	2	4	J	4	J	4	NR	b	NA
cis-1,2-Dichloroethene	(µg/L)		9	2	4	J	4	J	4	70		0
Trichloroethene	(µg/L)		9	2	13		5		9	5		1

Table 4.42. REGIME=Bear Creek—AREA NAME=Exit Pathway Spring/Surface Water

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		26	26	258	39.4	151.2346	NR		NA
Chloride	(mg/L)		38	38	121	1.5	19.65737	250		0
Fluoride	(mg/L)		38	30	1.16	0.1	0.3002	4		0
Nitrate Nitrogen	(mg/L)		12	12	183	1.13	25.97917	10		6
Nitrate/Nitrite	(mg/L)		78	75	130	0.035	33.18753	NR		NA
Sulfate	(mg/L)		38	38	75.7	5.4	20.04474	250		0
Aluminum, ICAP	(mg/L)		12	12	1.24	0.219	0.595167	0.2		12
Antimony, ICAP	(mg/L)		12	12	0.2	0.2	0.2	0.006		12
Arsenic, ICAP	(mg/L)		12	12	0.2	0.2	0.2	0.05		12
Barium, ICAP	(mg/L)		12	12	0.668	0.0413	0.142475	2		0
Boron, ICAP	(mg/L)		12	1	0.17	0.17	0.17	NR		NA
Cadmium, PMS	(mg/L)		12	2	0.0258	0.00715	0.016475	0.005		2
Cadmium, ICAP	(mg/L)		12	12	0.0266	0.01	0.011383	0.005		12
Calcium, ICAP	(mg/L)		12	12	281	25.6	96.59167	NR		NA
Chromium, ICAP	(mg/L)		12	12	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		12	12	1.31	0.185	0.452917	0.3		7
Lead, PMS	(mg/L)		12	5	0.00337	0.000737	0.001621	0.015	c	0
Lead, ICAP	(mg/L)		12	12	0.1	0.1	0.1	0.015	c	12
Magnesium, ICAP	(mg/L)		12	12	40.3	7.26	16.4	NR		NA
Manganese, ICAP	(mg/L)		12	12	5.41	0.00826	0.681168	0.05		6
Nickel, PMS	(mg/L)		12	5	0.109	0.00527	0.032138	NR		NA
Nickel, ICAP	(mg/L)		12	12	0.105	0.05	0.054583	0.1	d	1
Niobium, ICAP	(mg/L)		12	12	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		12	12	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		12	7	5.19	2.08	3.174286	NR		NA
Selenium, ICAP	(mg/L)		12	12	0.2	0.2	0.2	0.05		12
Silicon, ICAP	(mg/L)		12	12	8.53	4.21	5.159167	NR		NA
Sodium, ICAP	(mg/L)		12	12	37.7	3.24	14.4225	NR		NA
Strontium, ICAP	(mg/L)		12	12	0.824	0.0597	0.259758	NR		NA
Sulfur, ICAP	(mg/L)		12	12	16.3	3.35	7.236667	NR		NA
Thallium, ICAP	(mg/L)		12	12	0.2	0.2	0.2	NR		NA

Table 4.42 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Titanium, ICAP	(mg/L)		12	12	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		12	12	0.0693		0.00575		0.026677	0.03		5
Uranium, ICAP	(mg/L)		12	12	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		12	12	0.2		0.2		0.2	NR		NA
Alkalinity as HCO3	(mg/L)		12	12	420		80.2		193.4333	NR		NA
Conductivity	(umho/cm)		12	12	2020		243		715.5833	NR		NA
Dissolved Solids	(mg/L)		33	33	1600		109		360.7576	500		6
pH	(pH)		12	12	7.59		6.61		7.005	6.5/8.5		0
Total Suspended Solids	(mg/L)		33	17	29.3		2		11.34706	NR		NA
Turbidity	(NTU)		12	12	8.6		1.27		5.245	1		12
Uranium-233/234	(pCi/L)		275	274	93.3		1.21		12.51869	NR		NA
Uranium-235	(pCi/L)		275	208	9.82		0.27		1.470385	24		0
Uranium-236	(pCi/L)		275	161	6.47		0.23		1.175714	NR		NA
Uranium-238	(pCi/L)		275	274	101.6		0.42		21.53252	24		93
Technetium-99	(pCi/L)		20	15	284.95		8.83		74.552	4000		0
Gross Alpha	(pCi/L)		13	11	29		3.33		12.65727	15	e	4
Gross Beta	(pCi/L)		30	30	600		1.9		62.08	50	a	8
1,1,1-Trichloroethane	(µg/L)		31	1	1	J	1	J	1	200		0
1,1-Dichloroethane	(µg/L)		31	4	7		1	J	3.25	NR		NA
1,1-Dichloroethene	(µg/L)		31	2	3	J	1	J	2	7		0
1,2-Dichloroethene (Total)	(µg/L)		14	3	11		4	J	6.666667	NR	b	NA
Chloroform	(µg/L)		31	1	1	J	1	J	1	100	g	0
cis-1,2-Dichloroethene	(µg/L)		31	11	58		4	J	16.81818	70		0
Methylene chloride	(µg/L)		31	2	3	BJ	3	BJ	3	5		0
PCB-1254	(µg/L)		2	2	960		97		528.5	NR		NA
PCB-1260	(µg/L)		2	2	1400		120		760	NR		NA
Tetrachloroethene	(µg/L)		31	11	25		1	J	7.181818	5		4
Trichloroethene	(µg/L)		31	10	17		1	J	4.2	5		2
Vinyl chloride	(µg/L)		31	1	4		4		4	2		1

Table 4.43. REGIME=Bear Creek—AREA NAME=Oil Landfarm Waste Management Area

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		2	2	59.6	44.4	52	NR		NA
Chloride	(mg/L)		14	14	152	6.26	63.815	250		0
Fluoride	(mg/L)		14	7	0.48	0.105	0.227857	4		0
Nitrate Nitrogen	(mg/L)		12	8	566	20.9	177.5875	10		8
Sulfate	(mg/L)		14	14	53.1	1.1	18.14143	250		0
Aluminum, ICAP	(mg/L)		12	4	0.592	0.311	0.49875	0.2		4
Antimony, ICAP	(mg/L)		12	12	0.2	0.2	0.2	0.006		12
Antimony, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	0.006		2
Arsenic, PMS	(mg/L)		12	4	0.0139	0.00751	0.010488	0.05		0
Arsenic, PMS	(mg/L)	Filtered	2	2	0.0124	0.00958	0.01099	0.05		0
Arsenic, ICAP	(mg/L)		12	12	0.2	0.2	0.2	0.05		12
Arsenic, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		12	12	2	0.165	0.9245	2		0
Barium, ICAP	(mg/L)	Filtered	2	2	1.35	1.22	1.285	2		0
Boron, ICAP	(mg/L)		12	8	4.02	0.122	1.77225	NR		NA
Boron, ICAP	(mg/L)	Filtered	2	2	3.73	2.43	3.08	NR		NA
Cadmium, ICAP	(mg/L)		12	12	0.01	0.01	0.01	0.005		12
Cadmium, ICAP	(mg/L)	Filtered	2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		12	12	835	107	269.4167	NR		NA
Calcium, ICAP	(mg/L)	Filtered	2	2	178	157	167.5	NR		NA
Chromium, ICAP	(mg/L)		12	12	0.02	0.02	0.02	0.1		0
Chromium, ICAP	(mg/L)	Filtered	2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		12	10	29.6	0.0834	11.58934	0.3		8
Iron, ICAP	(mg/L)	Filtered	2	2	29	25.5	27.25	0.3		2
Lead, PMS	(mg/L)		12	3	0.00212	0.000537	0.001191	0.015	c	0
Lead, PMS	(mg/L)	Filtered	2	1	0.00214	0.00214	0.00214	0.015	c	0
Lead, ICAP	(mg/L)		12	12	0.1	0.1	0.1	0.015	c	12
Lead, ICAP	(mg/L)	Filtered	2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		12	12	0.13	0.0169	0.058175	NR		NA
Lithium, ICAP	(mg/L)	Filtered	2	2	0.134	0.122	0.128	NR		NA
Magnesium, ICAP	(mg/L)		12	12	62.1	11.5	38.6	NR		NA

Table 4.43 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Magnesium, ICAP	(mg/L)	Filtered	2	2	34	29.9	31.95	NR		NA
Manganese, ICAP	(mg/L)		12	10	9.44	0.0057	3.094612	0.05		6
Manganese, ICAP	(mg/L)	Filtered	2	2	9.24	7.08	8.16	0.05		2
Nickel, PMS	(mg/L)		12	9	0.0671	0.00527	0.028597	NR		NA
Nickel, PMS	(mg/L)	Filtered	2	2	0.0412	0.0305	0.03585	NR		NA
Nickel, ICAP	(mg/L)		12	12	0.0562	0.05	0.050625	0.1	d	0
Nickel, ICAP	(mg/L)	Filtered	2	2	0.0536	0.05	0.0518	0.1	d	0
Niobium, ICAP	(mg/L)		12	12	0.2	0.2	0.2	NR		NA
Niobium, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		12	12	0.5	0.5	0.5	NR		NA
Phosphorus, ICAP	(mg/L)	Filtered	2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		12	11	13.1	2.08	6.348182	NR		NA
Potassium, ICAP	(mg/L)	Filtered	2	2	13.1	11	12.05	NR		NA
Selenium, PMS	(mg/L)		12	2	0.0197	0.0186	0.01915	0.05		0
Selenium, PMS	(mg/L)	Filtered	2	1	0.0172	0.0172	0.0172	0.05		0
Selenium, ICAP	(mg/L)		12	12	0.2	0.2	0.2	0.05		12
Selenium, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		12	12	11.7	5.29	8.391667	NR		NA
Silicon, ICAP	(mg/L)	Filtered	2	2	8.33	7.23	7.78	NR		NA
Sodium, ICAP	(mg/L)		12	12	82.4	9.71	40.6175	NR		NA
Sodium, ICAP	(mg/L)	Filtered	2	2	78	54.3	66.15	NR		NA
Strontium, ICAP	(mg/L)		12	12	2.28	0.407	1.047	NR		NA
Strontium, ICAP	(mg/L)	Filtered	2	2	0.537	0.458	0.4975	NR		NA
Sulfur, ICAP	(mg/L)		12	12	18.5	1.52	7.298333	NR		NA
Sulfur, ICAP	(mg/L)	Filtered	2	2	7.15	3.88	5.515	NR		NA
Thallium, PMS	(mg/L)		12	1	0.000855	0.000855	0.000855	0.002		0
Thallium, ICAP	(mg/L)		12	12	0.2	0.2	0.2	NR		NA
Thallium, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		12	12	0.05	0.05	0.05	NR		NA
Titanium, ICAP	(mg/L)	Filtered	2	2	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		12	10	0.208	0.00127	0.075475	0.03		4
Uranium, PMS	(mg/L)	Filtered	2	2	0.22	0.135	0.1775	0.03		2

Table 4.43 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Uranium, ICAP	(mg/L)		12	12	2		2		2	NR		NA
Uranium, ICAP	(mg/L)	Filtered	2	2	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		12	12	0.2		0.2		0.2	NR		NA
Zirconium, ICAP	(mg/L)	Filtered	2	2	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		26	NA	25.66		-25.66		1.140385	NR		NA
Alkalinity as HCO3	(mg/L)		12	12	595		202		364.3333	NR		NA
Conductivity	(umho/cm)		12	12	5080		1056		1891.667	NR		NA
Dissolved Solids	(mg/L)		13	13	4000		95		1177.615	500		12
pH	(pH)		12	12	7.42		6.4		6.789167	6.5/8.5		1
Total Suspended Solids	(mg/L)		13	8	25		3		13.25	NR		NA
Turbidity	(NTU)		12	12	200		0.148		47.28408	1		9
Uranium-233/234	(pCi/L)		1	1	0.61		0.61		0.61	NR		NA
Uranium-234	(pCi/L)		4	4	34		19		25.75	20		3
Uranium-235	(pCi/L)		5	5	1.7		0.32		1.11	24		0
Uranium-236	(pCi/L)		5	4	0.45		0.33		0.3875	NR		NA
Uranium-238	(pCi/L)		5	4	67		39		52.75	24		4
Gross Alpha	(pCi/L)		14	4	87		65		76.5	15	e	4
Gross Beta	(pCi/L)		14	12	400		1.89		101.8658	50	a	6
Radium - Total Alpha	(pCi/L)		1	1	0.37		0.37		0.37	5	f	0
1,1,1-Trichloroethane	(µg/L)		14	2	6		1	J	3.5	200		0
1,1-Dichloroethane	(µg/L)		14	6	13		4	J	8.833333	NR		NA
1,1-Dichloroethene	(µg/L)		14	9	41		2	J	11.66667	7		3
1,2-Dichloroethene (Total)	(µg/L)		12	8	280		2	J	78.875	NR	b	NA
1,2-Dichloropropane	(µg/L)		14	2	2	J	2	J	2	5		0
1,4-Dichlorobenzene	(µg/L)		12	4	4	J	3	J	3.25	75		0
Acetone	(µg/L)		14	2	7	J	3	J	5	NR		NA
Benzene	(µg/L)		14	6	9		1	J	5.5	5		4
Carbon tetrachloride	(µg/L)		14	3	5	J	3	J	4	5		0
Chlorobenzene	(µg/L)		14	4	14		11		13	100		0
Chloroethane	(µg/L)		14	3	2	J	1	J	1.666667	NR		NA

Table 4.43 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloroform	(µg/L)		14	5	2	J	2	J	2	100	g	0
cis-1,2-Dichloroethene	(µg/L)		14	10	280		2	J	67.7	70		3
Tetrachloroethene	(µg/L)		14	8	24		1	J	5.25	5		2
trans-1,2-Dichloroethene	(µg/L)		14	1	1	J	1	J	1	100		0
Trichloroethene	(µg/L)		14	10	240		3	J	85.7	5		9
Trichlorofluoromethane	(µg/L)		12	2	6		3	J	4.5	NR		NA
Vinyl chloride	(µg/L)		14	4	42		18		28.5	2		4

Table 4.44. REGIME=Bear Creek—AREA NAME=Rust Spoil Area

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	2.32		1.6		1.96	250		0
Nitrate Nitrogen	(mg/L)		2	2	0.398		0.282		0.34	10		0
Sulfate	(mg/L)		2	2	3.59		3		3.295	250		0
Antimony, ICAP	(mg/L)		2	2	0.2		0.2		0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2		0.2		0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.0237		0.0208		0.02225	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01		0.01		0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	98.8		89.2		94	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02		0.02		0.02	0.1		0
Lead, ICAP	(mg/L)		2	2	0.1		0.1		0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	7.22		6.03		6.625	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.05		0.05		0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5		0.5		0.5	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	6.4		5.77		6.085	NR		NA
Sodium, ICAP	(mg/L)		2	2	4.06		3.36		3.71	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.0868		0.0792		0.083	NR		NA
Sulfur, ICAP	(mg/L)		2	2	1.16		0.992		1.076	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		2	1	0.000566		0.000566		0.00056 6	0.03		0
Uranium, ICAP	(mg/L)		2	2	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		4	NA	38.75		-38.75		0	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	272		229		250.5	NR		NA
Conductivity	(umho/cm)		2	2	547		495		521	NR		NA
Dissolved Solids	(mg/L)		2	2	311		264		287.5	500		0
pH	(pH)		2	2	6.99		6.94		6.965	6.5/8.5		0
Turbidity	(NTU)		2	2	0.252		0.225		0.2385	1		0
Tetrachloroethene	(µg/L)		2	1	1	J	1	J	1	5		0
Trichloroethene	(µg/L)		2	2	5		4	J	4.5	5		0

Table 4.45. REGIME=Bear Creek—AREA NAME=S-3 Site

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		5	4	265	2.5	94.225	NR		NA
Chloride	(mg/L)		41	41	25300	0.87	913.6239	250		6
Fluoride	(mg/L)		41	29	7.22	0.107	1.69031	4		2
Nitrate Nitrogen	(mg/L)		8	8	11000	42.5	2794.625	10		8
Nitrate/Nitrite	(mg/L)		5	4	1310	30.6	630.65	NR		NA
Sulfate	(mg/L)		41	39	2990	0.52	338.7582	250		5
Aluminum, ICAP	(mg/L)		36	12	2.78	0.215	1.219083	0.2		12
Antimony, ICAP	(mg/L)		36	36	4	0.2	0.516667	0.006		36
Arsenic, PMS	(mg/L)		36	4	1.07	0.0143	0.3004	0.05		2
Arsenic, ICAP	(mg/L)		36	36	4	0.2	0.516667	0.05		36
Barium, ICAP	(mg/L)		36	34	401	0.0138	23.38675	2		4
Beryllium, ICAP	(mg/L)		36	2	0.00124	0.00105	0.001145	0.004		0
Boron, ICAP	(mg/L)		36	19	3.29	0.101	0.984842	NR		NA
Cadmium, PMS	(mg/L)		36	3	0.0215	0.00254	0.014713	0.005		2
Cadmium, ICAP	(mg/L)		36	36	0.2	0.01	0.025833	0.005		36
Calcium, ICAP	(mg/L)		36	36	9920	0.947	707.2549	NR		NA
Chromium, PMS	(mg/L)		36	21	0.0734	0.011	0.028852	NR		NA
Chromium, ICAP	(mg/L)		36	8	0.4	0.02	0.093425	0.1		2
Iron, ICAP	(mg/L)		36	29	4.76	0.054	1.068372	0.3		17
Lead, PMS	(mg/L)		36	17	0.00349	0.000561	0.001281	0.015	c	0
Lead, ICAP	(mg/L)		36	36	2	0.1	0.258333	0.015	c	36
Lithium, ICAP	(mg/L)		36	27	12.8	0.0159	0.874663	NR		NA
Magnesium, ICAP	(mg/L)		36	36	2460	0.239	188.46	NR		NA
Manganese, ICAP	(mg/L)		36	28	23.3	0.00578	2.083469	0.05		14
Mercury, CVAA	(mg/L)		36	2	0.000957	0.000264	0.000611	0.002		0
Molybdenum, ICAP	(mg/L)		36	2	0.223	0.0557	0.13935	NR		NA
Nickel, PMS	(mg/L)		36	17	0.228	0.00535	0.040585	NR		NA
Nickel, ICAP	(mg/L)		36	8	1	0.05	0.2266	0.1	d	2
Niobium, ICAP	(mg/L)		36	36	4	0.2	0.516667	NR		NA
Nitrate/Nitrite as Nitrogen	(mg/L)		28	11	1340	0.0606	457.3339	NR		NA
Phosphorus, ICAP	(mg/L)		36	36	10	0.5	1.291667	NR		NA

Table 4.45 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value	# Mmts. > Ref
Potassium, ICAP	(mg/L)			36	26	125	2.13	21.85038	NR	NA
Selenium, PMS	(mg/L)			36	4	4.9	0.0661	1.37015	0.05	4
Selenium, ICAP	(mg/L)			36	36	4	0.2	0.516667	0.05	36
Silicon, ICAP	(mg/L)			36	35	10.3	2.75	5.735429	NR	NA
Sodium, ICAP	(mg/L)			36	36	14400	0.493	939.5758	NR	NA
Strontium, ICAP	(mg/L)			36	36	303	0.0131	19.59455	NR	NA
Sulfur, ICAP	(mg/L)			36	36	1010	0.5	112.6599	NR	NA
Thallium, PMS	(mg/L)			36	4	0.00088	0.000504	0.000673	0.002	0
Thallium, ICAP	(mg/L)			36	36	4	0.2	0.516667	NR	NA
Titanium, ICAP	(mg/L)			36	36	1	0.05	0.129167	NR	NA
Uranium, PMS	(mg/L)			36	16	1.22	0.000699	0.152858	0.03	2
Uranium, ICAP	(mg/L)			36	36	40	2	5.166667	NR	NA
m,p-Xylene, X-10 lab	(µg/L)			1	1	2	2	2	NR	NA
Zinc, ICAP	(mg/L)			36	18	0.324	0.0544	0.160378	5	0
Zirconium, ICAP	(mg/L)			36	36	4	0.2	0.516667	NR	NA
Static Water Level	(ft - toc)			77	NA	214.45	-214.45	0.59026	NR	NA
Alkalinity as CO3	(mg/L)			36	6	59.8	22	36.93333	NR	NA
Alkalinity as HCO3	(mg/L)			36	36	1130	44.1	384.5361	NR	NA
Conductivity	(umho/cm)			36	36	62900	310	6696.472	NR	NA
Dissolved Solids	(mg/L)			40	40	65900	178	6295.6	500	31
pH	(pH)			36	36	8.9	5.16	7.425	6.5/8.5	11
Total Suspended Solids	(mg/L)			40	21	72	2	10.58571	NR	NA
Turbidity	(NTU)			36	36	396	0.324	29.82556	1	28
Uranium-233/234	(pCi/L)			5	5	111.8	0.35	45.098	NR	NA
Uranium-234	(pCi/L)			8	8	150	0.61	35.10375	20	2
Uranium-235	(pCi/L)			13	6	11.1	0.18	5.785	24	0
Uranium-236	(pCi/L)			13	4	9.43	2.2	5.685	NR	NA
Neptunium-237	(pCi/L)			3	2	10.59	8.17	9.38	1.2	2
Uranium-238	(pCi/L)			13	12	390	0.3	95.14667	24	4
Americium-241	(pCi/L)			3	2	0.14	0.07	0.105	1.2	0
Technetium-99	(pCi/L)			41	10	370	38	182.189	4000	0

Table 4.45 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Gross Alpha	(pCi/L)		41	4	343.33		4.3		173.405	15	e	3
Gross Beta	(pCi/L)		41	9	988		3.08		244.5789	50	a	8
Radium - Total Alpha	(pCi/L)		3	3	1.43		0.38		0.88	5	f	0
1,1-Dichloroethane	(µg/L)		41	2	1	J	1	J	1	NR		NA
1,1-Dichloroethene	(µg/L)		41	1	2	J	2	J	2	7		0
1,2-Dichloroethene (Total)	(µg/L)		36	2	10		5	J	7.5	NR	b	NA
1,2-Dimethylbenzene	(µg/L)		2	2	3		1		2	NR		NA
Acetone	(µg/L)		41	1	2	J	2	J	2	NR		NA
Acrylonitrile	(µg/L)		36	1	31		31		31	NR		NA
Benzene	(µg/L)		41	7	26		1	J	13.28571	5		5
Carbon disulfide	(µg/L)		41	1	2	J	2	J	2	NR		NA
Chloroform	(µg/L)		41	2	2	J	1	J	1.5	100	g	0
cis-1,2-Dichloroethene	(µg/L)		41	2	10		5	J	7.5	70		0
Ethylbenzene	(µg/L)		41	8	11		1	J	3	700		0
Methylene chloride	(µg/L)		41	2	7		6		6.5	5		2
Styrene	(µg/L)		41	9	11		1	J	2.555556	100		0
Tetrachloroethene	(µg/L)		41	8	15		1	J	6.125	5		4
Toluene	(µg/L)		41	3	6		2	J	3.333333	1000		0
Trichloroethene	(µg/L)		41	2	16		4	J	10	5		1
Xylenes	(µg/L)		41	1	5		5		5	10000		0

Table 4.46. REGIME=Bear Creek—AREA NAME=Spoil Area I

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	14.8	13.1	13.95	250		0
Nitrate Nitrogen	(mg/L)		2	2	6.51	6.24	6.375	10		0
Sulfate	(mg/L)		2	2	77.9	67.5	72.7	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.0649	0.0648	0.06485	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	131	129	130	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	16.2	15.7	15.95	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.0628	0.0586	0.0607	0.05		2
Nickel, PMS	(mg/L)		2	1	0.00633	0.00633	0.00633	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	3.79	3.75	3.77	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	5.06	5.06	5.06	NR		NA
Sodium, ICAP	(mg/L)		2	2	8.53	7.67	8.1	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.217	0.214	0.2155	NR		NA
Sulfur, ICAP	(mg/L)		2	2	25.9	23.9	24.9	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		2	2	0.00256	0.00212	0.00234	0.03		0
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		4	NA	58.01	-58.01	0	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	292	278	285	NR		NA
Conductivity	(umho/cm)		2	2	801	793	797	NR		NA

Table 4.46 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Dissolved Solids	(mg/L)		2	2	477		450		463.5	500		0
pH	(pH)		2	2	7.08		6.9		6.99	6.5/8.5		0
Turbidity	(NTU)		2	2	0.261		0.238		0.2495	1		0
Gross Beta	(pCi/L)		2	2	30		13		21.5	50	a	0
1,2-Dichloroethene (Total)	(µg/L)		2	1	1	J	1	J	1	NR	b	NA
cis-1,2-Dichloroethene	(µg/L)		2	1	1	J	1	J	1	70		0
Tetrachloroethene	(µg/L)		2	2	8		8		8	5		2
Trichloroethene	(µg/L)		2	2	4	J	3	J	3.5	5		0

Table 4.47. REGIME=Chestnut Ridge—AREA NAME=Chestnut Ridge Borrow Area Waste Pile

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	1.04	0.9	0.97	250		0
Nitrate Nitrogen	(mg/L)		2	2	0.136	0.124	0.13	10		0
Sulfate	(mg/L)		2	2	4.37	3.47	3.92	250		0
Aluminum, ICAP	(mg/L)		2	1	0.868	0.868	0.868	0.2		1
Antimony, PMS	(mg/L)		2	1	0.00271	0.00271	0.00271	0.006		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.0214	0.0211	0.02125	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	32.4	27.4	29.9	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	2	0.463	0.0782	0.2706	0.3		1
Lead, PMS	(mg/L)		2	2	0.00194	0.000507	0.001224	0.015	c	0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	19.3	17.6	18.45	NR		NA
Manganese, ICAP	(mg/L)		2	1	0.00614	0.00614	0.00614	0.05		0
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	4.75	3.76	4.255	NR		NA
Sodium, ICAP	(mg/L)		2	2	0.782	0.614	0.698	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.0218	0.0203	0.02105	NR		NA
Sulfur, ICAP	(mg/L)		2	2	1.45	1.18	1.315	NR		NA
Thallium, PMS	(mg/L)		2	2	0.000642	0.000547	0.000595	0.002		0
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		2	1	0.000554	0.000554	0.000554	0.03		0
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA

Table 4.47 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Static Water Level	(ft - toc)		6	NA	134.04	-115.68	44.30833	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	156	134	145	NR		NA
Conductivity	(umho/cm)		2	2	319	296	307.5	NR		NA
Dissolved Solids	(mg/L)		4	4	217	143	174.25	500		0
pH	(pH)		2	2	7.3	7.11	7.205	6.5/8.5		0
Total Suspended Solids	(mg/L)		4	1	2	2	2	NR		NA
Turbidity	(NTU)		2	2	9.28	1.23	5.255	1		2
Gross Alpha	(pCi/L)		4	2	3.2	0.98	2.09	15	e	0
Gross Beta	(pCi/L)		4	2	6.4	2.76	4.58	50	a	0

Table 4.48. REGIME=Chestnut Ridge—AREA NAME=Chestnut Ridge Security Pits

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Alkalinity	(mg/L)		2	2	130		130		130	NR		NA
Chloride	(mg/L)		26	26	2.46		0.73		1.765769	250		0
Fluoride	(mg/L)		26	1	0.19	J	0.19	J	0.19	4		0
Nitrate Nitrogen	(mg/L)		24	21	4.13		0.117		0.794952	10		0
Nitrate/Nitrite	(mg/L)		3	3	0.84		0.68		0.753333	NR		NA
Sulfate	(mg/L)		26	26	10.9		0.68		3.033077	250		0
Antimony, PMS	(mg/L)		24	1	0.00251		0.00251		0.00251	0.006		0
Antimony, ICAP	(mg/L)		24	24	0.2		0.2		0.2	0.006		24
Antimony, ICAP	(mg/L)	Filtered	2	2	0.2		0.2		0.2	0.006		2
Arsenic, ICAP	(mg/L)		24	24	0.2		0.2		0.2	0.05		24
Arsenic, ICAP	(mg/L)	Filtered	2	2	0.2		0.2		0.2	0.05		2
Barium, ICAP	(mg/L)		24	24	0.108		0.0102		0.031379	2		0
Barium, ICAP	(mg/L)	Filtered	2	2	0.0172		0.0166		0.0169	2		0
Beryllium, ICAP	(mg/L)		24	1	0.00106		0.00106		0.00106	0.004		0
Boron, ICAP	(mg/L)		24	6	0.338		0.144		0.234167	NR		NA
Boron, ICAP	(mg/L)	Filtered	2	2	0.349		0.309		0.329	NR		NA
Cadmium, ICAP	(mg/L)		24	24	0.01		0.01		0.01	0.005		24
Cadmium, ICAP	(mg/L)	Filtered	2	2	0.01		0.01		0.01	0.005		2
Calcium, ICAP	(mg/L)		24	24	64.3		25.8		47.9375	NR		NA
Calcium, ICAP	(mg/L)	Filtered	2	2	50.3		49.9		50.1	NR		NA
Chromium, ICAP	(mg/L)		24	24	0.02		0.02		0.02	0.1		0
Chromium, ICAP	(mg/L)	Filtered	2	2	0.02		0.02		0.02	0.1		0
Iron, ICAP	(mg/L)		24	8	5.55		0.0913		1.5574	0.3		4
Lead, PMS	(mg/L)		24	6	0.00227		0.000665		0.001397	0.015	c	0
Lead, ICAP	(mg/L)		24	24	0.1		0.1		0.1	0.015	c	24
Lead, ICAP	(mg/L)	Filtered	2	2	0.1		0.1		0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		24	24	36.8		17.4		30.59583	NR		NA
Magnesium, ICAP	(mg/L)	Filtered	2	2	31.4		30.7		31.05	NR		NA
Manganese, ICAP	(mg/L)		24	7	0.202		0.00801		0.054887	0.05		2
Manganese, ICAP	(mg/L)	Filtered	2	1	0.0138		0.0138		0.0138	0.05		0

Table 4.48 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Nickel, ICAP	(mg/L)		24	24	0.05	0.05	0.05	0.1	d	0
Nickel, ICAP	(mg/L)	Filtered	2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		24	24	0.2	0.2	0.2	NR		NA
Niobium, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		24	24	0.5	0.5	0.5	NR		NA
Phosphorus, ICAP	(mg/L)	Filtered	2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		24	3	4.76	2.01	3.19	NR		NA
Selenium, ICAP	(mg/L)		24	24	0.2	0.2	0.2	0.05		24
Selenium, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		24	24	5.45	2.32	4.29875	NR		NA
Silicon, ICAP	(mg/L)	Filtered	2	2	4.6	4.44	4.52	NR		NA
Sodium, ICAP	(mg/L)		24	24	3.55	0.59	1.087667	NR		NA
Sodium, ICAP	(mg/L)	Filtered	2	2	0.639	0.621	0.63	NR		NA
Strontium, ICAP	(mg/L)		24	24	0.0288	0.0145	0.020088	NR		NA
Strontium, ICAP	(mg/L)	Filtered	2	2	0.0168	0.0164	0.0166	NR		NA
Sulfur, ICAP	(mg/L)		24	24	3.77	0.5	1.076208	NR		NA
Sulfur, ICAP	(mg/L)	Filtered	2	2	0.905	0.887	0.896	NR		NA
Thallium, ICAP	(mg/L)		24	24	0.2	0.2	0.2	NR		NA
Thallium, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		24	24	0.05	0.05	0.05	NR		NA
Titanium, ICAP	(mg/L)	Filtered	2	2	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		24	2	0.000923	0.00061	0.000767	0.03		0
Uranium, PMS	(mg/L)	Filtered	2	2	0.00103	0.000614	0.000822	0.03		0
Uranium, ICAP	(mg/L)		24	24	2	2	2	NR		NA
Uranium, ICAP	(mg/L)	Filtered	2	2	2	2	2	NR		NA
Zinc, ICAP	(mg/L)		24	1	0.101	0.101	0.101	5		0
Zirconium, ICAP	(mg/L)		24	24	0.2	0.2	0.2	NR		NA
Zirconium, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		56	NA	154.78	-154.78	14.04589	NR		NA
Alkalinity as HCO3	(mg/L)		26	26	300	130	229.8077	NR		NA
Conductivity	(umho/cm)		26	26	605	250	448.6538	NR		NA

Table 4.48 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Dissolved Solids	(mg/L)			31	31	397		130	232.7742	500		0
pH	(pH)			27	27	8.92		6.88	7.536667	6.5/8.5		1
Total Suspended Solids	(mg/L)			31	2	8		3	5.5	NR		NA
Turbidity	(NTU)			27	24	68.3		0.123	5.541542	1		11
Gross Alpha	(pCi/L)			31	7	7.9		1.5	3.52	15	e	0
Gross Beta	(pCi/L)			31	3	3.14		2.29	2.586667	50	a	0
1,1,1-Trichloroethane	(µg/L)			31	19	51		1.3	17.52632	200		0
1,1-Dichloroethane	(µg/L)			31	17	110		1.2	39.23529	NR		NA
1,1-Dichloroethene	(µg/L)			31	17	93		1.9	25.33529	7		10
1,2-Dichloroethane	(µg/L)			31	1	2	J	2	J 2	5		0
cis-1,2-Dichloroethene	(µg/L)			31	3	6		3.2	4.466667	70		0
Tetrachloroethene	(µg/L)			31	16	15		1	J 5.75	5		7
Trichloroethene	(µg/L)			31	2	0.52	J	0.37	J 0.445	5		0
Trichlorofluoromethane	(µg/L)			26	10	38		2	J 13.46	NR		NA

Table 4.49. REGIME=Chestnut Ridge—AREA NAME=Chestnut Ridge Sediment Disposal Basin

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value	# Mmts. > Ref
Static Water Level	(ft - toc)		8	NA	160.3	116.92	135.963 8	NR	NA
Dissolved Solids	(mg/L)		8	8	403	151	239.875	500	0
Total Suspended Solids	(mg/L)		8	2	8.2	5.8	7	NR	NA

Table 4.50. REGIME=Chestnut Ridge—AREA NAME=Construction/Demolition Landfill VI

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Alkalinity	(mg/L)		8	8	240		91		178.875	NR		NA
Chloride	(mg/L)		8	8	10		0.96	J	3.92	250		0
Fluoride	(mg/L)		8	4	0.17	J	0.15	J	0.16	4		0
Nitrate/Nitrite	(mg/L)		8	8	0.66		0.21	J	0.36	NR		NA
Sulfate	(mg/L)		8	8	42		2.1	J	12.575	250		0
Static Water Level	(ft - toc)		9	NA	70.44		37.5		55.48667	NR		NA
Alkalinity as HCO3	(mg/L)		8	8	240		91		178.875	NR		NA
Conductivity	(umho/cm)		8	8	550		180		366.25	NR		NA
Dissolved Solids	(mg/L)		8	8	310		92		199	500		0
pH	(pH)		8	8	7.8		6.7		7.3875	6.5/8.5		0
Turbidity	(NTU)		8	6	0.72		0.08	J	0.295	1		0
Gross Alpha	(pCi/L)		8	1	4		4		4	15	e	0
Gross Beta	(pCi/L)		8	2	4.4		2.4		3.4	50	a	0
Acetone	(µg/L)		9	1	3.4	J	3.4	J	3.4	NR		NA
Bromodichloromethane	(µg/L)		9	1	0.21	J	0.21	J	0.21	100	g	0
Chloroform	(µg/L)		9	2	16	Q	15		15.5	100	g	0
Toluene	(µg/L)		9	1	0.25	J	0.25	J	0.25	1000		0

Table 4.51. REGIME=Chestnut Ridge— AREA NAME=Construction/Demolition Landfill VII

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value	# Mmts. > Ref
Alkalinity	(mg/L)		6	6	200		140		166.6667	NR	NA
Chloride	(mg/L)		6	6	2.8	J	2	J	2.4	250	0
Fluoride	(mg/L)		6	6	0.18	J	0.13	J	0.155	4	0
Nitrate/Nitrite	(mg/L)		6	6	0.55		0.31	J	0.403333	NR	NA
Sulfate	(mg/L)		6	6	3.3	J	2.4	J	2.733333	250	0
Static Water Level	(ft - toc)		6	NA	41.45		4.55		18.28667	NR	NA
Alkalinity as HCO3	(mg/L)		6	6	200		140		166.6667	NR	NA
Conductivity	(umho/cm)		6	6	400		260		325	NR	NA
Dissolved Solids	(mg/L)		6	6	210		140		176.6667	500	0
pH	(pH)		6	6	7.7		7.3		7.55	6.5/8.5	0
Total Suspended Solids	(mg/L)		6	3	12		2.4	J	7.133333	NR	NA
Turbidity	(NTU)		6	6	14		0.1		5.405	1	3

Table 4.52. REGIME=Chestnut Ridge—AREA NAME=Exit Pathway Spring/Surface Water

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Alkalinity	(mg/L)		2	2	100		99	99.5	NR		NA
Bicarbonate	(mg/L)		8	8	178		122	152.625	NR		NA
Chloride	(mg/L)		20	20	4.3		1.28	2.217	250		0
Fluoride	(mg/L)		20	6	0.17	J	0.11	0.134333	4		0
Nitrate Nitrogen	(mg/L)		10	10	2.99		0.0926	0.84556	10		0
Nitrate/Nitrite	(mg/L)		6	6	1.4		0.098	0.514667	NR		NA
Sulfate	(mg/L)		20	20	36.6		5.2	13.2455	250		0
Aluminum, ICAP	(mg/L)		10	6	0.543		0.257	0.333167	0.2		6
Antimony, ICAP	(mg/L)		10	10	0.2		0.2	0.2	0.006		10
Arsenic, ICAP	(mg/L)		10	10	0.2		0.2	0.2	0.05		10
Barium, ICAP	(mg/L)		10	10	0.0876		0.0219	0.04742	2		0
Cadmium, ICAP	(mg/L)		10	10	0.01		0.01	0.01	0.005		10
Calcium, ICAP	(mg/L)		10	10	51.5		22.8	38.66	NR		NA
Iron, ICAP	(mg/L)		10	9	0.433		0.0655	0.193789	0.3		2
Lead, ICAP	(mg/L)		10	10	0.1		0.1	0.1	0.015	c	10
Lithium, ICAP	(mg/L)		10	2	0.0267		0.015	0.02085	NR		NA
Magnesium, ICAP	(mg/L)		10	10	16.4		8.36	12.928	NR		NA
Manganese, ICAP	(mg/L)		10	6	0.047		0.00643	0.022198	0.05		0
Nickel, PMS	(mg/L)		10	1	0.00558		0.00558	0.00558	NR		NA
Niobium, ICAP	(mg/L)		10	10	0.2		0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		10	10	0.5		0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		10	1	2.42		2.42	2.42	NR		NA
Selenium, ICAP	(mg/L)		10	10	0.2		0.2	0.2	0.05		10
Silicon, ICAP	(mg/L)		10	10	5.91		2.98	4.181	NR		NA
Sodium, ICAP	(mg/L)		10	10	2.09		0.88	1.4184	NR		NA
Strontium, ICAP	(mg/L)		10	10	0.374		0.0311	0.10125	NR		NA
Sulfur, ICAP	(mg/L)		10	10	5.17		1.82	2.792	NR		NA
Thallium, ICAP	(mg/L)		10	10	0.2		0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		10	10	0.05		0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		10	9	0.00295		0.000524	0.001122	0.03		0
Uranium, ICAP	(mg/L)		10	10	2		2	2	NR		NA

Table 4.52 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Zinc, ICAP	(mg/L)		10	1	0.168		0.168	0.168	5		0
Zirconium, ICAP	(mg/L)		10	10	0.2		0.2	0.2	NR		NA
Alkalinity as HCO3	(mg/L)		12	12	186		90.2	139.4333	NR		NA
Conductivity	(umho/cm)		12	12	370		202	291.3333	NR		NA
Dissolved Solids	(mg/L)		20	20	255		99	180.75	500		0
pH	(pH)		12	12	7.6		6.78	7.078333	6.5/8.5		0
Total Suspended Solids	(mg/L)		20	5	866	Q	2	178.98	NR		NA
Turbidity	(NTU)		12	12	42		1.24	6.980833	1		12
Gross Alpha	(pCi/L)		20	8	15.2		1.21	3.98375	15	e	1
Gross Beta	(pCi/L)		20	8	17.53		1.99	6.39875	50	a	0

Table 4.53. REGIME=Chestnut Ridge—AREA NAME=Filled Coal Ash Pond

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		6	6	0.83	0.71	0.76	250		0
Nitrate Nitrogen	(mg/L)		6	6	0.26	0.061	0.122767	10		0
Sulfate	(mg/L)		6	6	3.16	0.92	1.755	250		0
Aluminum, ICAP	(mg/L)		6	4	1.44	0.221	0.648	0.2		4
Antimony, PMS	(mg/L)		6	2	0.00325	0.00316	0.003205	0.006		0
Antimony, ICAP	(mg/L)		6	6	0.2	0.2	0.2	0.006		6
Antimony, ICAP	(mg/L)	Filtered	1	1	0.2	0.2	0.2	0.006		1
Arsenic, PMS	(mg/L)		6	1	0.00633	0.00633	0.00633	0.05		0
Arsenic, PMS	(mg/L)	Filtered	1	1	0.00641	0.00641	0.00641	0.05		0
Arsenic, ICAP	(mg/L)		6	6	0.2	0.2	0.2	0.05		6
Arsenic, ICAP	(mg/L)	Filtered	1	1	0.2	0.2	0.2	0.05		1
Barium, ICAP	(mg/L)		6	6	0.0209	0.00811	0.014615	2		0
Barium, ICAP	(mg/L)	Filtered	1	1	0.0186	0.0186	0.0186	2		0
Cadmium, ICAP	(mg/L)		6	6	0.01	0.01	0.01	0.005		6
Cadmium, ICAP	(mg/L)	Filtered	1	1	0.01	0.01	0.01	0.005		1
Calcium, ICAP	(mg/L)		6	6	42.6	4.08	26.57333	NR		NA
Calcium, ICAP	(mg/L)	Filtered	1	1	33.4	33.4	33.4	NR		NA
Chromium, ICAP	(mg/L)		6	6	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		6	4	0.849	0.164	0.37325	0.3		1
Lead, PMS	(mg/L)		6	5	0.0015	0.00066	0.000951	0.015	c	0
Lead, ICAP	(mg/L)		6	6	0.1	0.1	0.1	0.015	c	6
Lead, ICAP	(mg/L)	Filtered	1	1	0.1	0.1	0.1	0.015	c	1
Lithium, ICAP	(mg/L)		6	2	0.114	0.11	0.112	NR		NA
Magnesium, ICAP	(mg/L)		6	6	23.2	10.5	17.88333	NR		NA
Magnesium, ICAP	(mg/L)	Filtered	1	1	19.9	19.9	19.9	NR		NA
Manganese, ICAP	(mg/L)		6	2	0.0114	0.0063	0.00885	0.05		0
Nickel, ICAP	(mg/L)		6	6	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		6	6	0.2	0.2	0.2	NR		NA
Niobium, ICAP	(mg/L)	Filtered	1	1	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		6	6	0.5	0.5	0.5	NR		NA
Phosphorus, ICAP	(mg/L)	Filtered	1	1	0.5	0.5	0.5	NR		NA

Table 4.53 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Potassium, ICAP	(mg/L)		6	2	43.9	42.9	43.4	NR		NA
Selenium, PMS	(mg/L)		6	1	0.013	0.013	0.013	0.05		0
Selenium, PMS	(mg/L)	Filtered	1	1	0.0144	0.0144	0.0144	0.05		0
Selenium, ICAP	(mg/L)		6	6	0.2	0.2	0.2	0.05		6
Selenium, ICAP	(mg/L)	Filtered	1	1	0.2	0.2	0.2	0.05		1
Silicon, ICAP	(mg/L)		6	6	6.74	3.61	4.946667	NR		NA
Silicon, ICAP	(mg/L)	Filtered	1	1	4.39	4.39	4.39	NR		NA
Sodium, ICAP	(mg/L)		6	6	19.3	0.41	6.6535	NR		NA
Sodium, ICAP	(mg/L)	Filtered	1	1	0.409	0.409	0.409	NR		NA
Strontium, ICAP	(mg/L)		6	6	0.192	0.0163	0.0609	NR		NA
Strontium, ICAP	(mg/L)	Filtered	1	1	0.0164	0.0164	0.0164	NR		NA
Sulfur, ICAP	(mg/L)		6	6	1.14	0.5	0.698333	NR		NA
Sulfur, ICAP	(mg/L)	Filtered	1	1	0.5	0.5	0.5	NR		NA
Thallium, PMS	(mg/L)		6	2	0.00057	0.000567	0.000569	0.002		0
Thallium, ICAP	(mg/L)		6	6	0.2	0.2	0.2	NR		NA
Thallium, ICAP	(mg/L)	Filtered	1	1	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		6	6	0.05	0.05	0.05	NR		NA
Titanium, ICAP	(mg/L)	Filtered	1	1	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		6	2	0.000712	0.000546	0.000629	0.03		0
Uranium, ICAP	(mg/L)		6	6	2	2	2	NR		NA
Uranium, ICAP	(mg/L)	Filtered	1	1	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		6	6	0.2	0.2	0.2	NR		NA
Zirconium, ICAP	(mg/L)	Filtered	1	1	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		12	NA	52.87	-52.87	0	NR		NA
Alkalinity as CO3	(mg/L)		6	2	48	31	39.5	NR		NA
Alkalinity as HCO3	(mg/L)		6	6	191	89	155.3333	NR		NA
Conductivity	(umho/cm)		6	6	382	315	339.8333	NR		NA
Dissolved Solids	(mg/L)		6	6	203	164	179.8333	500		0
pH	(pH)		6	6	9.27	7.47	8.185	6.5/8.5		2
Total Suspended Solids	(mg/L)		6	2	12	4	8	NR		NA
Turbidity	(NTU)		6	6	20.5	0.45	6.873333	1		5
Gross Beta	(pCi/L)		6	2	35	30	32.5	50	a	0

Table 4.54. REGIME=Chestnut Ridge—AREA NAME=Industrial Landfill II

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Alkalinity	(mg/L)		6	6	240		110		178.3333	NR		NA
Chloride	(mg/L)		6	6	3.7		1.6	J	2.616667	250		0
Fluoride	(mg/L)		6	4	1.8		0.16	J	0.955	4		0
Nitrate/Nitrite	(mg/L)		6	5	0.38	J	0.02	J	0.184	NR		NA
Sulfate	(mg/L)		6	6	17		5.6		10.5	250		0
Static Water Level	(ft - toc)		6	NA	84.67		26.88		65.15833	NR		NA
Alkalinity as CO3	(mg/L)		6	3	130		7		68	NR		NA
Alkalinity as HCO3	(mg/L)		6	5	240		41		172.2	NR		NA
Conductivity	(umho/cm)		6	6	460		280		358.3333	NR		NA
Dissolved Solids	(mg/L)		6	6	240		150		191.6667	500		0
pH	(pH)		6	6	10		7.8		8.733333	6.5/8.5		2
Total Suspended Solids	(mg/L)		6	1	3.2	J	3.2	J	3.2	NR		NA
Turbidity	(NTU)		6	5	0.83		0.1		0.468	1		0
Gross Alpha	(pCi/L)		6	2	2.6		1.9		2.25	15	e	0
Gross Beta	(pCi/L)		6	5	16.9		2.2		7.34	50	a	0
Toluene	(µg/L)		6	1	0.27	J	0.27	J	0.27	1000		0

Table 4.55. REGIME=Chestnut Ridge—AREA NAME=Industrial Landfill IV

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Alkalinity	(mg/L)		12	12	220		140		180	NR		NA
Chloride	(mg/L)		12	12	14		1.2	J	4.683333	250		0
Fluoride	(mg/L)		12	4	0.17	J	0.15	J	0.16	4		0
Nitrate/Nitrite	(mg/L)		12	12	0.57		0.24	J	0.415	NR		NA
Sulfate	(mg/L)		12	12	6.8		1.6	J	3.858333	250		0
Static Water Level	(ft - toc)		12	NA	123.37		82.23		105.5	NR		NA
Alkalinity as CO3	(mg/L)		12	2	6		5		5.5	NR		NA
Alkalinity as HCO3	(mg/L)		12	12	220		140		178.3333	NR		NA
Conductivity	(umho/cm)		12	12	420		280		361.6667	NR		NA
Dissolved Solids	(mg/L)		12	12	220		140		186.6667	500		0
pH	(pH)		12	12	8.4		7.4		7.883333	6.5/8.5		0
Total Suspended Solids	(mg/L)		12	2	7.2		2.8	J	5	NR		NA
Turbidity	(NTU)		12	9	8		0.09	J	2.02	1		3
Gross Alpha	(pCi/L)		12	1	2.5		2.5		2.5	15	e	0
Gross Beta	(pCi/L)		12	3	2.1		1.8		1.966667	50	a	0
1,1,1-Trichloroethane	(µg/L)		12	4	21		15		17.5	200		0
1,1-Dichloroethane	(µg/L)		12	4	17		14		16	NR		NA
1,1-Dichloroethene	(µg/L)		12	4	4.8		4.2		4.5	7		0
Carbon disulfide	(µg/L)		12	1	0.64	J	0.64	J	0.64	NR		NA
Chloromethane	(µg/L)		12	2	4.1		1.1	J	2.6	NR		NA
cis-1,2-Dichloroethene	(µg/L)		12	1	0.49	Q	0.49	Q	0.49	70		0
Tetrachloroethene	(µg/L)		12	1	0.47	Q	0.47	Q	0.47	5		0
Trichloroethene	(µg/L)		12	1	0.41	Q	0.41	Q	0.41	5		0

Table 4.56. REGIME=Chestnut Ridge—AREA NAME=Industrial Landfill V

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Alkalinity	(mg/L)		10	10	180		120		150	NR		NA
Chloride	(mg/L)		10	10	6		1.3	J	2.89	250		0
Fluoride	(mg/L)		10	6	0.23	J	0.15	J	0.17	4		0
Nitrate/Nitrite	(mg/L)		10	10	1.4		0.09	J	0.654	NR		NA
Sulfate	(mg/L)		10	10	45		1.6	J	10.8	250		0
Static Water Level	(ft - toc)		10	NA	121.51		14.06		79.21	NR		NA
Alkalinity as CO3	(mg/L)		10	1	2.5	J	2.5	J	2.5	NR		NA
Alkalinity as HCO3	(mg/L)		10	10	180		120		150	NR		NA
Conductivity	(umho/cm)		10	10	460		220		313	NR		NA
Dissolved Solids	(mg/L)		10	10	270		120		176	500		0
pH	(pH)		10	10	8.3		7.7		7.96	6.5/8.5		0
Total Suspended Solids	(mg/L)		10	4	4.6		1.2	J	2.1	NR		NA
Turbidity	(NTU)		10	10	3		0.09	J	0.903	1		2
Gross Alpha	(pCi/L)		10	1	1.8		1.8		1.8	15	e	0
1,1,1-Trichloroethane	(µg/L)		10	2	0.77	J	0.57	J	0.67	200		0
Acetone	(µg/L)		10	1	9.5	J	9.5	J	9.5	NR		NA
Carbon disulfide	(µg/L)		10	2	0.33	J	0.25	J	0.29	NR		NA

Table 4.57. REGIME=Chestnut Ridge—AREA NAME=Kerr Hollow Quarry

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Static Water Level	(ft - toc)		8	NA	81.26	5.39	45.88	NR		NA
Dissolved Solids	(mg/L)		8	8	318	120	220.75	500		0
Total Suspended Solids	(mg/L)		8	4	13.6	5.4	8.05	NR		NA
Gross Alpha	(pCi/L)		8	7	12.12	2.03	5.038571	15	e	0
Gross Beta	(pCi/L)		8	6	20.81	3.82	12.96833	50	a	0

Table 4.58. REGIME=Chestnut Ridge—AREA NAME=United Nuclear Corporation Site

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		8	8	314		70.3	165.6625	NR		NA
Carbonate	(mg/L)		8	2	91.5		72.5	82	NR		NA
Chloride	(mg/L)		8	8	19.3		1.2	5.7	250		0
Nitrate/Nitrite	(mg/L)		8	8	1.7		0.053	0.641	NR		NA
Sulfate	(mg/L)		8	8	3.8		0.72	2.24125	250		0
Static Water Level	(ft - toc)		8	NA	75.68		47.3	67.79875	NR		NA
Dissolved Solids	(mg/L)		8	8	317		137	209.375	500		0
Total Suspended Solids	(mg/L)		8	1	15		15	15	NR		NA
Uranium-233/234	(pCi/L)		8	8	2.46		0.38	1.10625	NR		NA
Uranium-235	(pCi/L)		8	1	0.41		0.41	0.41	24		0
Uranium-236	(pCi/L)		8	2	0.35		0.25	0.3	NR		NA
Uranium-238	(pCi/L)		8	4	0.63		0.29	0.4625	24		0
Gross Alpha	(pCi/L)		8	5	13.31	Q	1.23	4.62	15	e	0
Gross Beta	(pCi/L)		8	7	60.83		3.06	18.67286	50	a	1

Table 4.59. REGIME=East Fork Poplar Creek—AREA NAME=Building 8110

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		4	4	28.9	16.6	20.575	250		0
Nitrate Nitrogen	(mg/L)		4	4	131	35	84.975	10		4
Sulfate	(mg/L)		4	4	75	59.8	65.325	250		0
Aluminum, ICAP	(mg/L)		4	3	3.94	0.216	1.553667	0.2		3
Antimony, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.006		4
Antimony, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05		4
Arsenic, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		4	4	0.199	0.131	0.1665	2		0
Barium, ICAP	(mg/L)	Filtered	2	2	0.127	0.111	0.119	2		0
Cadmium, ICAP	(mg/L)		4	4	0.01	0.01	0.01	0.005		4
Cadmium, ICAP	(mg/L)	Filtered	2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		4	4	214	129	172.25	NR		NA
Calcium, ICAP	(mg/L)	Filtered	2	2	149	126	137.5	NR		NA
Chromium, PMS	(mg/L)		4	1	0.0492	0.0492	0.0492	NR		NA
Chromium, ICAP	(mg/L)		4	4	0.0406	0.02	0.02515	0.1		0
Chromium, ICAP	(mg/L)	Filtered	2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		4	4	3.69	0.0732	1.07505	0.3		2
Lead, PMS	(mg/L)		4	1	0.00348	0.00348	0.00348	0.015	c	0
Lead, ICAP	(mg/L)		4	4	0.1	0.1	0.1	0.015	c	4
Lead, ICAP	(mg/L)	Filtered	2	2	0.1	0.1	0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		4	4	68.5	34.6	52.125	NR		NA
Magnesium, ICAP	(mg/L)	Filtered	2	2	41	33	37	NR		NA
Manganese, ICAP	(mg/L)		4	4	0.844	0.0634	0.30685	0.05		4
Manganese, ICAP	(mg/L)	Filtered	2	2	0.124	0.0751	0.09955	0.05		2
Mercury, CVAA	(mg/L)		4	3	0.00763	0.000496	0.003269	0.002		1
Mercury, CVAA	(mg/L)	Filtered	2	2	0.00186	0.000969	0.001415	0.002		0
Nickel, ICAP	(mg/L)		4	4	0.05	0.05	0.05	0.1	d	0
Nickel, ICAP	(mg/L)	Filtered	2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA
Niobium, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	NR		NA

Table 4.59 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value	# Mmts. > Ref
Phosphorus, ICAP	(mg/L)		4	4	0.5	0.5	0.5	NR	NA
Phosphorus, ICAP	(mg/L)	Filtered	2	2	0.5	0.5	0.5	NR	NA
Potassium, ICAP	(mg/L)		4	4	3.55	2.73	3.2075	NR	NA
Potassium, ICAP	(mg/L)	Filtered	2	2	2.68	2.38	2.53	NR	NA
Selenium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05	4
Selenium, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	0.05	2
Silicon, ICAP	(mg/L)		4	4	9.56	4.93	6.205	NR	NA
Silicon, ICAP	(mg/L)	Filtered	2	2	4.29	3.9	4.095	NR	NA
Sodium, ICAP	(mg/L)		4	4	23.6	17.1	20.875	NR	NA
Sodium, ICAP	(mg/L)	Filtered	2	2	20.5	17	18.75	NR	NA
Strontium, ICAP	(mg/L)		4	4	0.62	0.314	0.46875	NR	NA
Strontium, ICAP	(mg/L)	Filtered	2	2	0.376	0.304	0.34	NR	NA
Sulfur, ICAP	(mg/L)		4	4	26	21.4	22.775	NR	NA
Sulfur, ICAP	(mg/L)	Filtered	2	2	24.8	21.5	23.15	NR	NA
Thallium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR	NA
Thallium, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	NR	NA
Titanium, ICAP	(mg/L)		4	4	0.108	0.05	0.0645	NR	NA
Titanium, ICAP	(mg/L)	Filtered	2	2	0.05	0.05	0.05	NR	NA
Uranium, PMS	(mg/L)		4	4	0.00438	0.00112	0.002438	0.03	0
Uranium, PMS	(mg/L)	Filtered	2	2	0.00402	0.00233	0.003175	0.03	0
Uranium, ICAP	(mg/L)		4	4	2	2	2	NR	NA
Uranium, ICAP	(mg/L)	Filtered	2	2	2	2	2	NR	NA
Zinc, ICAP	(mg/L)		4	1	0.0606	0.0606	0.0606	5	0
Zirconium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR	NA
Zirconium, ICAP	(mg/L)	Filtered	2	2	0.2	0.2	0.2	NR	NA
Static Water Level	(ft - toc)		8	NA	35.82	-35.82	0	NR	NA
Alkalinity as HCO3	(mg/L)		4	4	278	260	269.5	NR	NA
Conductivity	(umho/cm)		4	4	1807	1066	1441	NR	NA
Dissolved Solids	(mg/L)		4	4	1070	617	836.5	500	4
pH	(pH)		4	4	6.96	6.89	6.925	6.5/8.5	0

Table 4.59 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Total Suspended Solids	(mg/L)		4	3	47	3		17.66667	NR		NA
Turbidity	(NTU)		4	4	65.8	1.28		18.3925	1		4
Gross Alpha	(pCi/L)		4	1	5.5	5.5		5.5	15	e	0
Gross Beta	(pCi/L)		4	1	5.7	5.7		5.7	50	a	0
1,2-Dichloroethene (Total)	(µg/L)		4	4	64	14		37.25	NR	b	NA
Carbon tetrachloride	(µg/L)		4	2	7	6		6.5	5		2
Chloroform	(µg/L)		4	4	14	3	J	8.75	100	g	0
cis-1,2-Dichloroethene	(µg/L)		4	4	64	14		37.25	70		0
Tetrachloroethene	(µg/L)		4	4	150	120		127.5	5		4
Trichloroethene	(µg/L)		4	4	440	130		267.5	5		4

Table 4.60. REGIME=East Fork Poplar Creek—AREA NAME=Building 9201-1

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	44.3	14.8	29.55	250		0
Fluoride	(mg/L)		2	2	1	0.818	0.909	4		0
Nitrate Nitrogen	(mg/L)		2	2	0.556	0.395	0.4755	10		0
Sulfate	(mg/L)		2	2	47.1	25.3	36.2	250		0
Aluminum, ICAP	(mg/L)		2	1	6.23	6.23	6.23	0.2		1
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, PMS	(mg/L)		2	1	0.00521	0.00521	0.00521	0.05		0
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.211	0.0348	0.1229	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	55.3	52.9	54.1	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	2	13.3	0.107	6.7035	0.3		1
Lead, PMS	(mg/L)		2	1	0.00622	0.00622	0.00622	0.015	c	0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	11.4	11.2	11.3	NR		NA
Manganese, ICAP	(mg/L)		2	1	3.41	3.41	3.41	0.05		1
Mercury, CVAA	(mg/L)		2	1	0.000221	0.000221	0.000221	0.002		0
Nickel, PMS	(mg/L)		2	1	0.00758	0.00758	0.00758	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.826	0.5	0.663	NR		NA
Potassium, ICAP	(mg/L)		2	2	4.01	2.25	3.13	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	11.5	3.36	7.43	NR		NA
Sodium, ICAP	(mg/L)		2	2	38.6	8.75	23.675	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.155	0.144	0.1495	NR		NA
Sulfur, ICAP	(mg/L)		2	2	16.2	8.75	12.475	NR		NA
Thallium, PMS	(mg/L)		2	1	0.00247	0.00247	0.00247	0.002		1
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.148	0.05	0.099	NR		NA

Table 4.60 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Uranium, PMS	(mg/L)		2	2	0.00364		0.00128		0.00246	0.03		0
Uranium, ICAP	(mg/L)		2	2	2		2		2	NR		NA
Zinc, ICAP	(mg/L)		2	1	0.11		0.11		0.11	5		0
Zirconium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	142		139		140.5	NR		NA
Conductivity	(umho/cm)		2	2	414		378		396	NR		NA
Dissolved Solids	(mg/L)		2	2	289		242		265.5	500		0
pH	(pH)		2	2	7.09		6.94		7.015	6.5/8.5		0
Total Suspended Solids	(mg/L)		2	1	88		88		88	NR		NA
Turbidity	(NTU)		2	2	41.4		0.435		20.9175	1		1
Gross Alpha	(pCi/L)		2	1	4.4		4.4		4.4	15	e	0
1,2-Dichloroethene (Total)	(µg/L)		2	1	7		7		7	NR	b	NA
Chloroform	(µg/L)		2	2	21		3	J	12	100	g	0
cis-1,2-Dichloroethene	(µg/L)		2	1	7		7		7	70		0
Tetrachloroethene	(µg/L)		2	1	7		7		7	5		1
Trichloroethene	(µg/L)		2	1	1	J	1	J	1	5		0

Table 4.61. REGIME=East Fork Poplar Creek—AREA NAME=Building 9201-2

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		1	1	6.08	6.08	6.08	250		0
Fluoride	(mg/L)		1	1	0.181	0.181	0.181	4		0
Sulfate	(mg/L)		1	1	76.3	76.3	76.3	250		0
Aluminum, ICAP	(mg/L)		1	1	0.747	0.747	0.747	0.2		1
Antimony, ICAP	(mg/L)		1	1	0.2	0.2	0.2	0.006		1
Arsenic, ICAP	(mg/L)		1	1	0.2	0.2	0.2	0.05		1
Barium, ICAP	(mg/L)		1	1	0.181	0.181	0.181	2		0
Cadmium, ICAP	(mg/L)		1	1	0.01	0.01	0.01	0.005		1
Calcium, ICAP	(mg/L)		1	1	109	109	109	NR		NA
Chromium, ICAP	(mg/L)		1	1	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		1	1	9.85	9.85	9.85	0.3		1
Lead, PMS	(mg/L)		1	1	0.000519	0.000519	0.000519	0.015	c	0
Lead, ICAP	(mg/L)		1	1	0.1	0.1	0.1	0.015	c	1
Magnesium, ICAP	(mg/L)		1	1	16.7	16.7	16.7	NR		NA
Manganese, ICAP	(mg/L)		1	1	1.26	1.26	1.26	0.05		1
Nickel, PMS	(mg/L)		1	1	0.00504	0.00504	0.00504	NR		NA
Nickel, ICAP	(mg/L)		1	1	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		1	1	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		1	1	3.47	3.47	3.47	NR		NA
Selenium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	0.05		1
Silicon, ICAP	(mg/L)		1	1	3.04	3.04	3.04	NR		NA
Sodium, ICAP	(mg/L)		1	1	4.72	4.72	4.72	NR		NA
Strontium, ICAP	(mg/L)		1	1	0.251	0.251	0.251	NR		NA
Sulfur, ICAP	(mg/L)		1	1	26.9	26.9	26.9	NR		NA
Thallium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		1	1	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		1	1	0.000877	0.000877	0.000877	0.03		0
Uranium, ICAP	(mg/L)		1	1	2	2	2	NR		NA

Table 4.61 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value	# Mmts. > Ref
Zirconium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	NR	NA
Static Water Level	(ft - toc)		2	NA	8.27	-8.27	0	NR	NA
Alkalinity as HCO3	(mg/L)		1	1	256	256	256	NR	NA
Conductivity	(umho/cm)		1	1	681	681	681	NR	NA
Dissolved Solids	(mg/L)		1	1	387	387	387	500	0
pH	(pH)		1	1	6.71	6.71	6.71	6.5/8.5	0
Total Suspended Solids	(mg/L)		1	1	9	9	9	NR	NA
Turbidity	(NTU)		1	1	9.95	9.95	9.95	1	1

Table 4.62. REGIME=East Fork Poplar Creek—AREA NAME=Building 9201-3

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	37.1	14	25.55	250		0
Fluoride	(mg/L)		2	2	0.976	0.797	0.8865	4		0
Nitrate Nitrogen	(mg/L)		2	2	0.398	0.239	0.3185	10		0
Sulfate	(mg/L)		2	2	42	25.4	33.7	250		0
Aluminum, ICAP	(mg/L)		2	1	1.68	1.68	1.68	0.2		1
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.0787	0.0576	0.06815	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	51.6	50.8	51.2	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	2	0.918	0.147	0.5325	0.3		1
Lead, PMS	(mg/L)		2	2	0.016	0.000803	0.008402	0.015	c	1
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	10.8	10.7	10.75	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.0969	0.0173	0.0571	0.05		1
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	2.52	2.48	2.5	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	4.29	3.22	3.755	NR		NA
Sodium, ICAP	(mg/L)		2	2	29.4	9.03	19.215	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.146	0.136	0.141	NR		NA
Sulfur, ICAP	(mg/L)		2	2	14	8.6	11.3	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		2	2	0.00314	0.000847	0.001994	0.03		0
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA

Table 4.62 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Zinc, ICAP	(mg/L)		2	1	0.0786		0.0786		0.0786	5		0
Zirconium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	141		118		129.5	NR		NA
Conductivity	(umho/cm)		2	2	542		522		532	NR		NA
Dissolved Solids	(mg/L)		2	2	274		233		253.5	500		0
pH	(pH)		2	2	7.65		7.47		7.56	6.5/8.5		0
Total Suspended Solids	(mg/L)		2	1	6		6		6	NR		NA
Turbidity	(NTU)		2	2	5.59		3.04		4.315	1		2
1,2-Dichloroethene (Total)	(µg/L)		2	1	10		10		10	NR	b	NA
Bromodichloromethane	(µg/L)		2	1	2	J	2	J	2	100	g	0
Chloroform	(µg/L)		2	2	42		9		25.5	100	g	0
cis-1,2-Dichloroethene	(µg/L)		2	1	10		10		10	70		0
Tetrachloroethene	(µg/L)		2	1	11		11		11	5		1
Trichloroethene	(µg/L)		2	1	3	J	3	J	3	5		0

Table 4.63. REGIME=East Fork Poplar Creek—AREA NAME=Building 9202

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Aluminum, ICAP	(mg/L)		1	1	4.62		4.62		4.62	0.2		1
Antimony, ICAP	(mg/L)		1	1	0.2		0.2		0.2	0.006		1
Arsenic, ICAP	(mg/L)		1	1	0.2		0.2		0.2	0.05		1
Barium, ICAP	(mg/L)		1	1	0.174		0.174		0.174	2		0
Cadmium, ICAP	(mg/L)		1	1	0.01		0.01		0.01	0.005		1
Calcium, ICAP	(mg/L)		1	1	96		96		96	NR		NA
Chromium, PMS	(mg/L)		1	1	0.0335		0.0335		0.0335	NR		NA
Chromium, ICAP	(mg/L)		1	1	0.0456		0.0456		0.0456	0.1		0
Iron, ICAP	(mg/L)		1	1	3.23		3.23		3.23	0.3		1
Iron Related Bacteria	(cfu/ml)		1	1	5000		5000		5000	NR		NA
Lead, PMS	(mg/L)		1	1	0.00472		0.00472		0.00472	0.015	c	0
Lead, ICAP	(mg/L)		1	1	0.1		0.1		0.1	0.015	c	1
Magnesium, ICAP	(mg/L)		1	1	4.45		4.45		4.45	NR		NA
Manganese, ICAP	(mg/L)		1	1	0.145		0.145		0.145	0.05		1
Nickel, PMS	(mg/L)		1	1	0.143		0.143		0.143	NR		NA
Nickel, ICAP	(mg/L)		1	1	0.153		0.153		0.153	0.1	d	1
Niobium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	NR		NA
Phosphorus, ICAP	(mg/L)		1	1	0.5		0.5		0.5	NR		NA
Selenium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	0.05		1
Silicon, ICAP	(mg/L)		1	1	17.6		17.6		17.6	NR		NA
Slime Forming Bacteria	(cfu/ml)		1	1	100	J	100	J	100	NR		NA
Sodium, ICAP	(mg/L)		1	1	8.25		8.25		8.25	NR		NA
Strontium, ICAP	(mg/L)		1	1	0.196		0.196		0.196	NR		NA
Sulfate Reducing Bacteria	(cfu/ml)		1	1	1000		1000		1000	NR		NA
Sulfur, ICAP	(mg/L)		1	1	6.72		6.72		6.72	NR		NA
Thallium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		1	1	0.058		0.058		0.058	NR		NA
Uranium, PMS	(mg/L)		1	1	0.000789		0.000789		0.000789	0.03		0
Uranium, ICAP	(mg/L)		1	1	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		2	NA	4.73		-4.73		0	NR		NA
Conductivity	(umho/cm)		1	1	548		548		548	NR		NA
pH	(pH)		1	1	6.93		6.93		6.93	6.5/8.5		0

Table 4.64. REGIME=East Fork Poplar Creek—AREA NAME=Coal Pile Trench

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		4	4	15.6	11.6	13.6	250		0
Fluoride	(mg/L)		4	2	0.863	0.836	0.8495	4		0
Nitrate Nitrogen	(mg/L)		4	3	1.08	0.217	0.513	10		0
Sulfate	(mg/L)		4	4	1090	144	632.5	250		2
Aluminum, ICAP	(mg/L)		4	2	8.13	2.59	5.36	0.2		2
Antimony, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.006		4
Antimony, ICAP	(mg/L)	Filtered	1	1	0.2	0.2	0.2	0.006		1
Arsenic, PMS	(mg/L)		4	1	0.0083	0.0083	0.0083	0.05		0
Arsenic, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05		4
Arsenic, ICAP	(mg/L)	Filtered	1	1	0.2	0.2	0.2	0.05		1
Barium, ICAP	(mg/L)		4	4	0.124	0.0173	0.064725	2		0
Barium, ICAP	(mg/L)	Filtered	1	1	0.0603	0.0603	0.0603	2		0
Beryllium, ICAP	(mg/L)		4	1	0.00077	0.00077	0.00077	0.004		0
Boron, ICAP	(mg/L)		4	3	0.339	0.109	0.246333	NR		NA
Cadmium, ICAP	(mg/L)		4	4	0.01	0.01	0.01	0.005		4
Cadmium, ICAP	(mg/L)	Filtered	1	1	0.01	0.01	0.01	0.005		1
Calcium, ICAP	(mg/L)		4	4	455	97.5	278.875	NR		NA
Calcium, ICAP	(mg/L)	Filtered	1	1	95.5	95.5	95.5	NR		NA
Chromium, PMS	(mg/L)		4	1	0.0181	0.0181	0.0181	NR		NA
Chromium, ICAP	(mg/L)		4	4	0.02	0.02	0.02	0.1		0
Cobalt, ICAP	(mg/L)		4	2	0.0287	0.0226	0.02565	NR		NA
Copper, ICAP	(mg/L)		4	1	0.0244	0.0244	0.0244	1.3		0
Iron, ICAP	(mg/L)		4	3	14.4	0.0529	6.187633	0.3		2
Lead, PMS	(mg/L)		4	2	0.0249	0.00583	0.015365	0.015	c	1
Lead, ICAP	(mg/L)		4	4	0.1	0.1	0.1	0.015	c	4
Lead, ICAP	(mg/L)	Filtered	1	1	0.1	0.1	0.1	0.015	c	1
Lithium, ICAP	(mg/L)		4	2	0.0253	0.0182	0.02175	NR		NA
Lithium, ICAP	(mg/L)	Filtered	1	1	0.0142	0.0142	0.0142	NR		NA
Magnesium, ICAP	(mg/L)		4	4	69.4	24.5	47.625	NR		NA
Magnesium, ICAP	(mg/L)	Filtered	1	1	23.2	23.2	23.2	NR		NA

Table 4.64 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Manganese, ICAP	(mg/L)		4	4	9.69		0.188	5.117	0.05		4
Mercury, CVAA	(mg/L)		4	2	0.00521	Q	0.00157	0.00339	0.002		1
Nickel, PMS	(mg/L)		4	4	0.0349		0.00559	0.022773	NR		NA
Nickel, ICAP	(mg/L)		4	4	0.05		0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		4	4	0.2		0.2	0.2	NR		NA
Niobium, ICAP	(mg/L)	Filtered	1	1	0.2		0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		4	4	0.518		0.5	0.5045	NR		NA
Phosphorus, ICAP	(mg/L)	Filtered	1	1	0.5		0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		4	4	8.76		5.11	7.0775	NR		NA
Potassium, ICAP	(mg/L)	Filtered	1	1	4.66		4.66	4.66	NR		NA
Selenium, ICAP	(mg/L)		4	4	0.2		0.2	0.2	0.05		4
Selenium, ICAP	(mg/L)	Filtered	1	1	0.2		0.2	0.2	0.05		1
Silicon, ICAP	(mg/L)		4	4	13.5		4.97	7.8025	NR		NA
Silicon, ICAP	(mg/L)	Filtered	1	1	3.27		3.27	3.27	NR		NA
Sodium, ICAP	(mg/L)		4	4	19.3		9.38	12.97	NR		NA
Sodium, ICAP	(mg/L)	Filtered	1	1	12.7		12.7	12.7	NR		NA
Strontium, ICAP	(mg/L)		4	4	0.755		0.318	0.5445	NR		NA
Strontium, ICAP	(mg/L)	Filtered	1	1	0.293		0.293	0.293	NR		NA
Sulfur, ICAP	(mg/L)		4	4	383		52	221.7	NR		NA
Sulfur, ICAP	(mg/L)	Filtered	1	1	51.3		51.3	51.3	NR		NA
Thallium, PMS	(mg/L)		4	1	0.000505		0.000505	0.000505	0.002		0
Thallium, PMS	(mg/L)	Filtered	1	1	0.00255		0.00255	0.00255	0.002		1
Thallium, ICAP	(mg/L)		4	4	0.2		0.2	0.2	NR		NA
Thallium, ICAP	(mg/L)	Filtered	1	1	0.2		0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		4	4	0.132		0.05	0.0787	NR		NA
Titanium, ICAP	(mg/L)	Filtered	1	1	0.05		0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		4	4	0.000966		0.000658	0.000844	0.03		0
Uranium, ICAP	(mg/L)		4	4	2		2	2	NR		NA
Uranium, ICAP	(mg/L)	Filtered	1	1	2		2	2	NR		NA
Zinc, ICAP	(mg/L)		4	2	0.224		0.0613	0.14265	5		0
Zirconium, ICAP	(mg/L)		4	4	0.2		0.2	0.2	NR		NA
Zirconium, ICAP	(mg/L)	Filtered	1	1	0.2		0.2	0.2	NR		NA

Table 4.64 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Static Water Level	(ft - toc)		8	NA	12.23		-12.23		0	NR		NA
Alkalinity as HCO3	(mg/L)		4	4	274		214		242	NR		NA
Conductivity	(umho/cm)		4	4	2930		751		1718.5	NR		NA
Dissolved Solids	(mg/L)		4	4	1980		570		1284.5	500		4
pH	(pH)		4	4	7.28		6.31		6.79	6.5/8.5		1
Total Suspended Solids	(mg/L)		4	2	227		39		133	NR		NA
Turbidity	(NTU)		4	4	432		0.235		136.4768	1		2
Gross Alpha	(pCi/L)		4	2	15	Q	7.6		11.3	15	e	0
Gross Beta	(pCi/L)		4	1	16		16		16	50	a	0
1,2-Dichloroethene (Total)	(µg/L)		4	4	12		5		8.25	NR	b	NA
Chloroform	(µg/L)		4	2	12		8		10	100	g	0
cis-1,2-Dichloroethene	(µg/L)		4	4	12		5		8.25	70		0
Tetrachloroethene	(µg/L)		4	4	1300	Q	4	J	573	5		3
Trichloroethene	(µg/L)		4	4	10		1	J	5.25	5		2

Table 4.65. REGIME=East Fork Poplar Creek—AREA NAME=Exit Pathway Monitoring Location I

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		4	4	287	267	274.25	NR		NA
Chloride	(mg/L)		4	4	63.5	21.9	35.2	250		0
Fluoride	(mg/L)		4	2	0.25	0.16	0.205	4		0
Nitrate/Nitrite	(mg/L)		4	4	9.6	0.28	4.6425	NR		NA
Sulfate	(mg/L)		4	4	60.1	29.9	43.55	250		0
Static Water Level	(ft - toc)		4	NA	13.7	10.67	12.16	NR		NA
Dissolved Solids	(mg/L)		2	2	430	366	398	500		0
Total Suspended Solids	(mg/L)		2	1	8.7	8.7	8.7	NR		NA
Gross Alpha	(pCi/L)		4	4	93.14	7.84	49.5525	15	e	2
Gross Beta	(pCi/L)		4	4	44.86	4.49	20.23	50	a	0
Carbon tetrachloride	(µg/L)		4	4	72	11	44	5		4
Chloroform	(µg/L)		4	4	130	5	66.5	100	g	2
cis-1,2-Dichloroethene	(µg/L)		4	2	66	41	53.5	70		0
Tetrachloroethene	(µg/L)		4	4	45	5	17.75	5		3
Trichloroethene	(µg/L)		4	2	44	21	32.5	5		2

Table 4.66. REGIME=East Fork Poplar Creek—AREA NAME=Exit Pathway Monitoring Location J

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		21	21	283	144	232.6667	NR		NA
Chloride	(mg/L)		45	45	112	2.48	24.778	250		0
Fluoride	(mg/L)		45	33	1.13	0.161	0.584455	4		0
Nitrate Nitrogen	(mg/L)		14	10	0.682	0.0294	0.3272	10		0
Nitrate/Nitrite	(mg/L)		21	16	0.9	0.027	0.435438	NR		NA
Sulfate	(mg/L)		45	45	56	0.3	22.86089	250		0
Aluminum, ICAP	(mg/L)		24	4	0.825	0.285	0.52425	0.2		4
Antimony, ICAP	(mg/L)		24	24	0.2	0.2	0.2	0.006		24
Arsenic, ICAP	(mg/L)		24	24	0.2	0.2	0.2	0.05		24
Barium, ICAP	(mg/L)		24	24	0.749	0.0262	0.151896	2		0
Boron, ICAP	(mg/L)		24	13	0.737	0.102	0.264077	NR		NA
Cadmium, ICAP	(mg/L)		24	24	0.01	0.01	0.01	0.005		24
Calcium, ICAP	(mg/L)		24	24	139	17.2	59.85	NR		NA
Chromium, PMS	(mg/L)		24	2	0.0104	0.0102	0.0103	NR		NA
Chromium, ICAP	(mg/L)		24	10	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		24	19	0.628	0.0728	0.272658	0.3		7
Lead, PMS	(mg/L)		24	6	0.00117	0.000612	0.00091	0.015	c	0
Lead, ICAP	(mg/L)		24	24	0.1	0.1	0.1	0.015	c	24
Lithium, ICAP	(mg/L)		24	13	0.126	0.0108	0.044854	NR		NA
Magnesium, ICAP	(mg/L)		24	24	29.6	9.26	18.42708	NR		NA
Manganese, ICAP	(mg/L)		24	10	0.117	0.00535	0.050509	0.05		5
Nickel, PMS	(mg/L)		24	3	0.00764	0.00546	0.006283	NR		NA
Nickel, ICAP	(mg/L)		24	10	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		24	24	0.2	0.2	0.2	NR		NA
Nitrate/Nitrite as Nitrogen	(mg/L)		10	7	0.798	0.143	0.434571	NR		NA
Phosphorus, ICAP	(mg/L)		24	24	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		24	11	5.05	2.04	3.310909	NR		NA
Selenium, ICAP	(mg/L)		24	24	0.2	0.2	0.2	0.05		24
Silicon, ICAP	(mg/L)		24	24	9.02	3.77	5.138333	NR		NA
Sodium, ICAP	(mg/L)		24	24	174	0.774	31.49067	NR		NA

Table 4.66 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Strontium, ICAP	(mg/L)		24	24	4.07		0.0639		1.042113	NR		NA
Sulfur, ICAP	(mg/L)		24	24	18.8		0.5		7.661667	NR		NA
Thallium, ICAP	(mg/L)		24	24	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		24	24	0.05		0.05		0.05	NR		NA
Uranium, ICAP	(mg/L)		24	24	2		2		2	NR		NA
Zinc, ICAP	(mg/L)		24	15	0.295		0.0563		0.148727	5		0
Zirconium, ICAP	(mg/L)		24	24	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		50	NA	81.95		-81.95		2.3424	NR		NA
Alkalinity as HCO3	(mg/L)		24	24	370		145		237.25	NR		NA
Conductivity	(umho/cm)		24	24	880		254		497.125	NR		NA
Dissolved Solids	(mg/L)		45	45	580		162		315.5778	500		4
pH	(pH)		24	24	7.9		6.8		7.415833	6.5/8.5		0
Total Suspended Solids	(mg/L)		45	14	8		2		4.55	NR		NA
Turbidity	(NTU)		24	24	7.83		0.209		2.423042	1		17
Gross Alpha	(pCi/L)		46	16	7.13		1.16		2.593125	15	e	0
Gross Beta	(pCi/L)		46	16	159	Q	3.44		22.12688	50	a	2
1,2-Dichloroethene (Total)	(µg/L)		24	1	1	J	1	J	1	NR	b	NA
Acetone	(µg/L)		46	3	3	J	3	J	3	NR		NA
Benzene	(µg/L)		46	2	1	J	1	J	1	5		0
Carbon tetrachloride	(µg/L)		46	18	160		7		51.66667	5		18
Chloroform	(µg/L)		46	18	21		1	J	8.777778	100	g	0
cis-1,2-Dichloroethene	(µg/L)		46	3	2	J	1	J	1.666667	70		0
Ethylbenzene	(µg/L)		46	6	4	J	2	J	2.833333	700		0
Styrene	(µg/L)		46	5	5	J	1	J	2.6	100		0
Tetrachloroethene	(µg/L)		46	19	20		1	J	7.526316	5		11
Toluene	(µg/L)		46	5	4	J	2	J	2.8	1000		0
Trichloroethene	(µg/L)		46	14	4	J	1	J	2.142857	5		0
Xylenes	(µg/L)		46	2	2	J	2	J	2	10000		0

Table 4.67. REGIME=East Fork Poplar Creek—AREA NAME=Exit Pathway Scarboro Road/Pine Ridge

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		6	6	16.1	1.11	5.76	250		0
Fluoride	(mg/L)		6	6	0.321	0.135	0.2155	4		0
Sulfate	(mg/L)		6	6	123	7.02	68.13667	250		0
Antimony, PMS	(mg/L)		6	1	0.00328	0.00328	0.00328	0.006		0
Antimony, ICAP	(mg/L)		6	6	0.2	0.2	0.2	0.006		6
Arsenic, ICAP	(mg/L)		6	6	0.2	0.2	0.2	0.05		6
Barium, ICAP	(mg/L)		6	6	0.122	0.0408	0.066667	2		0
Boron, ICAP	(mg/L)		6	4	0.242	0.136	0.19075	NR		NA
Cadmium, ICAP	(mg/L)		6	6	0.01	0.01	0.01	0.005		6
Calcium, ICAP	(mg/L)		6	6	84.3	53.6	67.51667	NR		NA
Chromium, ICAP	(mg/L)		6	6	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		6	6	17.8	0.235	6.143167	0.3		4
Lead, PMS	(mg/L)		6	1	0.000866	0.000866	0.000866	0.015	c	0
Lead, ICAP	(mg/L)		6	6	0.1	0.1	0.1	0.015	c	6
Lithium, ICAP	(mg/L)		6	4	0.0334	0.0318	0.0326	NR		NA
Magnesium, ICAP	(mg/L)		6	6	42.7	16.2	28.38333	NR		NA
Manganese, ICAP	(mg/L)		6	6	3.87	0.0107	1.087283	0.05		2
Nickel, ICAP	(mg/L)		6	6	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		6	6	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		6	6	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		6	6	4.97	2.9	3.52	NR		NA
Selenium, ICAP	(mg/L)		6	6	0.2	0.2	0.2	0.05		6
Silicon, ICAP	(mg/L)		6	6	12.7	3.36	9.426667	NR		NA
Sodium, ICAP	(mg/L)		6	6	16.5	6.3	11.555	NR		NA
Strontium, ICAP	(mg/L)		6	6	1.59	0.0806	0.752517	NR		NA
Sulfur, ICAP	(mg/L)		6	6	42	2.45	23.53	NR		NA
Thallium, ICAP	(mg/L)		6	6	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		6	6	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		6	1	0.0011	0.0011	0.0011	0.03		0
Uranium, ICAP	(mg/L)		6	6	2	2	2	NR		NA

Table 4.67 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Zinc, ICAP	(mg/L)		6	2	0.831	0.737	0.784	5		0
Zirconium, ICAP	(mg/L)		6	6	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		12	NA	12.22	-12.22	0	NR		NA
Alkalinity as HCO3	(mg/L)		6	6	300	194	242	NR		NA
Conductivity	(umho/cm)		6	6	690	491	622.6667	NR		NA
Dissolved Solids	(mg/L)		6	6	455	245	358.1667	500		0
pH	(pH)		6	6	7.31	6.71	7.111667	6.5/8.5		0
Total Suspended Solids	(mg/L)		6	3	27	2	15	NR		NA
Turbidity	(NTU)		6	6	194	1.57	61.75167	1		6
Gross Alpha	(pCi/L)		6	1	2	2	2	15	e	0

Table 4.68. REGIME=East Fork Poplar Creek—AREA NAME=Exit Pathway Spring/Surface Water

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		2	2	199	156	177.5	NR		NA
Chloride	(mg/L)		3	3	9.2	1.06	6.386667	250		0
Fluoride	(mg/L)		3	2	0.28	0.13	0.205	4		0
Nitrate Nitrogen	(mg/L)		1	1	0.0316	0.0316	0.0316	10		0
Nitrate/Nitrite	(mg/L)		2	2	3.6	3.5	3.55	NR		NA
Sulfate	(mg/L)		3	3	28.5	4.87	17.02333	250		0
Aluminum, ICAP	(mg/L)		1	1	0.324	0.324	0.324	0.2		1
Antimony, ICAP	(mg/L)		1	1	0.2	0.2	0.2	0.006		1
Arsenic, ICAP	(mg/L)		1	1	0.2	0.2	0.2	0.05		1
Barium, ICAP	(mg/L)		1	1	0.0535	0.0535	0.0535	2		0
Cadmium, ICAP	(mg/L)		1	1	0.01	0.01	0.01	0.005		1
Calcium, ICAP	(mg/L)		1	1	5.46	5.46	5.46	NR		NA
Chromium, ICAP	(mg/L)		1	1	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		1	1	4.14	4.14	4.14	0.3		1
Lead, ICAP	(mg/L)		1	1	0.1	0.1	0.1	0.015	c	1
Magnesium, ICAP	(mg/L)		1	1	2.26	2.26	2.26	NR		NA
Manganese, ICAP	(mg/L)		1	1	0.629	0.629	0.629	0.05		1
Nickel, ICAP	(mg/L)		1	1	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		1	1	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		1	1	2.4	2.4	2.4	NR		NA
Selenium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	0.05		1
Silicon, ICAP	(mg/L)		1	1	7.13	7.13	7.13	NR		NA
Sodium, ICAP	(mg/L)		1	1	1.91	1.91	1.91	NR		NA
Strontium, ICAP	(mg/L)		1	1	0.0318	0.0318	0.0318	NR		NA
Sulfur, ICAP	(mg/L)		1	1	1.68	1.68	1.68	NR		NA
Thallium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		1	1	0.05	0.05	0.05	NR		NA
Uranium, ICAP	(mg/L)		1	1	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	NR		NA

Table 4.68 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Alkalinity as HCO3	(mg/L)		1	1	25.9		25.9		25.9	NR		NA
Conductivity	(umho/cm)		1	1	94		94		94	NR		NA
Dissolved Solids	(mg/L)		15	15	269		49		205.5333	500		0
pH	(pH)		1	1	6.24		6.24		6.24	6.5/8.5		1
Total Suspended Solids	(mg/L)		15	4	18		6.3		9.35	NR		NA
Turbidity	(NTU)		1	1	8.02		8.02		8.02	1		1
Uranium-233/234	(pCi/L)		4	4	2.58		1.47		2.0525	NR		NA
Uranium-235	(pCi/L)		5	3	0.43		0.37		0.396667	24		0
Uranium-236	(pCi/L)		5	2	0.6		0.3		0.45	NR		NA
Uranium-238	(pCi/L)		5	4	5.37		1.61		3.3	24		0
Gross Alpha	(pCi/L)		7	7	12.99		2.6		5.538571	15	e	0
Gross Beta	(pCi/L)		7	5	8.43		3.79		5.72	50	a	0
1,1-Dichloroethane	(µg/L)		7	1	1	J	1	J	1	NR		NA
Bromodichloromethane	(µg/L)		7	1	1	J	1	J	1	100	g	0
Chloroform	(µg/L)		7	2	6		3	J	4.5	100	g	0
cis-1,2-Dichloroethene	(µg/L)		7	2	6		4	J	5	70		0
Tetrachloroethene	(µg/L)		7	2	13		10		11.5	5		2
Trichloroethene	(µg/L)		7	2	5		4	J	4.5	5		0

Table 4.69. REGIME=East Fork Poplar Creek—AREA NAME=Fire Training Facility

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	2.25	1.81	2.03	250		0
Fluoride	(mg/L)		2	2	0.134	0.121	0.1275	4		0
Nitrate Nitrogen	(mg/L)		2	2	1.32	1.27	1.295	10		0
Sulfate	(mg/L)		2	2	6.08	5.78	5.93	250		0
Aluminum, ICAP	(mg/L)		2	2	1.08	0.448	0.764	0.2		2
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.027	0.016	0.0215	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	56.3	16.3	36.3	NR		NA
Chromium, PMS	(mg/L)		2	1	0.0111	0.0111	0.0111	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	1	0.0565	0.0565	0.0565	0.3		0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.0247	0.0243	0.0245	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	20.6	18.1	19.35	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	3.59	2.21	2.9	NR		NA
Sodium, ICAP	(mg/L)		2	2	2.69	2.57	2.63	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.422	0.26	0.341	NR		NA
Sulfur, ICAP	(mg/L)		2	2	2.49	1.89	2.19	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		4	NA	43.69	-43.69	0	NR		NA

Table 4.69 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Alkalinity as CO3	(mg/L)		2	2	23.6		22.8		23.2	NR		NA
Conductivity	(umho/cm)		2	2	1193		615		904	NR		NA
Dissolved Solids	(mg/L)		2	2	156		98		127	500		0
pH	(pH)		2	2	11.12		10.9		11.01	6.5/8.5		2
Turbidity	(NTU)		2	2	1.77		0.819		1.2945	1		1
Gross Beta	(pCi/L)		2	2	14		12		13	50	a	0
1,2-Dichloroethene (Total)	(µg/L)		2	1	2	J	2	J	2	NR	b	NA
cis-1,2-Dichloroethene	(µg/L)		2	1	2	J	2	J	2	70		0
Tetrachloroethene	(µg/L)		2	2	6		2	J	4	5		1
Trichloroethene	(µg/L)		2	1	2	J	2	J	2	5		0

Table 4.70. REGIME=East Fork Poplar Creek—AREA NAME=Groundwater Monitoring Plan Grid Location B2

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	174	170	172	250		0
Nitrate Nitrogen	(mg/L)		2	2	12.1	6.5	9.3	10		1
Sulfate	(mg/L)		2	2	86.6	67.5	77.05	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.118	0.106	0.112	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	172	155	163.5	NR		NA
Chromium, PMS	(mg/L)		2	2	0.0792	0.0165	0.04785	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.0741	0.02	0.04705	0.1		0
Iron, ICAP	(mg/L)		2	2	1.09	0.25	0.67	0.3		1
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.0304	0.0294	0.0299	NR		NA
Magnesium, ICAP	(mg/L)		2	2	18.5	18.1	18.3	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.661	0.31	0.4855	0.05		2
Nickel, PMS	(mg/L)		2	2	0.55	0.282	0.416	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.618	0.291	0.4545	0.1	d	2
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	2.67	2.39	2.53	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	7.09	6.85	6.97	NR		NA
Sodium, ICAP	(mg/L)		2	2	27.1	25.9	26.5	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.297	0.295	0.296	NR		NA
Sulfur, ICAP	(mg/L)		2	2	29.9	24.4	27.15	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		2	1	0.000986	0.000986	0.000986	0.03		0
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA

Table 4.70 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Static Water Level	(ft - toc)		4	NA	10.9	-10.9	0	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	175	167	171	NR		NA
Conductivity	(umho/cm)		2	2	1203	1189	1196	NR		NA
Dissolved Solids	(mg/L)		2	2	917	861	889	500		2
pH	(pH)		2	2	7.47	7.45	7.46	6.5/8.5		0
Total Suspended Solids	(mg/L)		2	1	3	3	3	NR		NA
Turbidity	(NTU)		2	2	7.81	0.859	4.3345	1		1
Gross Beta	(pCi/L)		2	1	19	19	19	50	a	0

Table 4.71. REGIME=East Fork Poplar Creek—AREA NAME=Groundwater Monitoring Plan Grid Location B3

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	13.9	13.3	13.6	250		0
Nitrate Nitrogen	(mg/L)		2	2	225	222	223.5	10		2
Sulfate	(mg/L)		2	2	22.7	20.8	21.75	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.944	0.938	0.941	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	346	335	340.5	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.0199	0.0191	0.0195	NR		NA
Magnesium, ICAP	(mg/L)		2	2	29.9	29	29.45	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.794	0.778	0.786	0.05		2
Nickel, PMS	(mg/L)		2	2	0.00928	0.00889	0.009085	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	3.29	3.16	3.225	NR		NA
Selenium, PMS	(mg/L)		2	1	0.0131	0.0131	0.0131	0.05		0
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	9.46	9.35	9.405	NR		NA
Sodium, ICAP	(mg/L)		2	2	10.9	10.8	10.85	NR		NA
Strontium, ICAP	(mg/L)		2	2	1.13	1.1	1.115	NR		NA
Sulfur, ICAP	(mg/L)		2	2	7.22	7.13	7.175	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		4	NA	7.84	-7.84	0	NR		NA

Table 4.71 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Alkalinity as HCO3	(mg/L)		2	2	154		147		150.5	NR		NA
Conductivity	(umho/cm)		2	2	2330		2210		2270	NR		NA
Dissolved Solids	(mg/L)		2	2	1930		1640		1785	500		2
pH	(pH)		2	2	6.29		6.29		6.29	6.5/8.5		2
Turbidity	(NTU)		2	2	0.705		0.662		0.6835	1		0
Gross Beta	(pCi/L)		2	1	20		20		20	50	a	0
1,1,1-Trichloroethane	(µg/L)		2	2	4	J	4	J	4	200		0
1,1-Dichloroethane	(µg/L)		2	2	19		18		18.5	NR		NA
1,1-Dichloroethene	(µg/L)		2	2	26		26		26	7		2
1,2-Dichloroethene (Total)	(µg/L)		2	2	930		850		890	NR	b	NA
cis-1,2-Dichloroethene	(µg/L)		2	2	930		850		890	70		2
Dichlorodifluoromethane	(µg/L)		2	2	14		10		12	NR		NA
Tetrachloroethene	(µg/L)		2	2	670		630		650	5		2
trans-1,2-Dichloroethene	(µg/L)		2	2	12		12		12	100		0
Trichloroethene	(µg/L)		2	2	250		230		240	5		2
Vinyl chloride	(µg/L)		2	2	21		21		21	2		2

Table 4.72. REGIME=East Fork Poplar Creek—AREA NAME=Groundwater Monitoring Plan Grid Location C2

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	3.91	1.34	2.625	250		0
Fluoride	(mg/L)		2	2	0.269	0.132	0.2005	4		0
Nitrate Nitrogen	(mg/L)		2	2	1.88	0.775	1.3275	10		0
Sulfate	(mg/L)		2	2	34.8	29	31.9	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.152	0.0833	0.11765	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	104	56.6	80.3	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Lead, PMS	(mg/L)		2	2	0.00466	0.00406	0.00436	0.015	c	0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	16.6	9.83	13.215	NR		NA
Nickel, PMS	(mg/L)		2	1	0.00875	0.00875	0.00875	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	7.02	6.07	6.545	NR		NA
Sodium, ICAP	(mg/L)		2	2	4.33	4.24	4.285	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.173	0.101	0.137	NR		NA
Sulfur, ICAP	(mg/L)		2	2	12.3	10	11.15	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		2	1	0.00737	0.00737	0.00737	0.03		0
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA

Table 4.72 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Static Water Level	(ft - toc)		4	NA	10.39	-10.39	0	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	286	167	226.5	NR		NA
Conductivity	(umho/cm)		2	2	595	409	502	NR		NA
Dissolved Solids	(mg/L)		2	2	362	255	308.5	500		0
pH	(pH)		2	2	6.76	6.59	6.675	6.5/8.5		0
Turbidity	(NTU)		2	2	0.264	0.158	0.211	1		0
Gross Alpha	(pCi/L)		2	1	5.5	5.5	5.5	15	e	0

Table 4.73. REGIME=East Fork Poplar Creek—AREA NAME=Groundwater Monitoring Plan Grid Location C3

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		4	4	33.9	14.5	23.9	250		0
Nitrate Nitrogen	(mg/L)		4	4	1.29	0.44	0.827	10		0
Sulfate	(mg/L)		4	4	102	57.4	80.1	250		0
Antimony, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.006		4
Arsenic, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05		4
Barium, ICAP	(mg/L)		4	4	0.118	0.0591	0.088975	2		0
Boron, ICAP	(mg/L)		4	4	0.123	0.102	0.1135	NR		NA
Cadmium, ICAP	(mg/L)		4	4	0.01	0.01	0.01	0.005		4
Calcium, ICAP	(mg/L)		4	4	107	93.3	100.7	NR		NA
Chromium, PMS	(mg/L)		4	1	0.0652	0.0652	0.0652	NR		NA
Chromium, ICAP	(mg/L)		4	4	0.0584	0.02	0.0296	0.1		0
Iron, ICAP	(mg/L)		4	2	2.12	0.067	1.0935	0.3		1
Lead, ICAP	(mg/L)		4	4	0.1	0.1	0.1	0.015	c	4
Lithium, ICAP	(mg/L)		4	4	0.0179	0.0122	0.014825	NR		NA
Magnesium, ICAP	(mg/L)		4	4	14.3	7.17	10.6425	NR		NA
Manganese, ICAP	(mg/L)		4	1	0.0159	0.0159	0.0159	0.05		0
Nickel, PMS	(mg/L)		4	2	0.0209	0.00841	0.014655	NR		NA
Nickel, ICAP	(mg/L)		4	4	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		4	4	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		4	4	2.83	2.45	2.6425	NR		NA
Selenium, PMS	(mg/L)		4	1	0.0139	0.0139	0.0139	0.05		0
Selenium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05		4
Silicon, ICAP	(mg/L)		4	4	6.94	5.94	6.395	NR		NA
Sodium, ICAP	(mg/L)		4	4	11.3	7.87	9.5125	NR		NA
Strontium, ICAP	(mg/L)		4	4	0.345	0.219	0.27925	NR		NA
Sulfur, ICAP	(mg/L)		4	4	37.3	19.3	28.4	NR		NA
Thallium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		4	4	0.05	0.05	0.05	NR		NA
Uranium, ICAP	(mg/L)		4	4	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA

Table 4.73 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Static Water Level	(ft - toc)		8	NA	9.8		-9.8		0	NR		NA
Alkalinity as HCO3	(mg/L)		4	4	206		186		198	NR		NA
Conductivity	(umho/cm)		4	4	696		657		675	NR		NA
Dissolved Solids	(mg/L)		4	4	433		370		403.5	500		0
pH	(pH)		4	4	7.42		7.12		7.2725	6.5/8.5		0
Turbidity	(NTU)		4	4	8.8		0.12		2.4055	1		1
1,1-Dichloroethene	(µg/L)		4	2	2	J	2	J	2	7		0
1,2-Dichloroethene (Total)	(µg/L)		4	4	140		1	J	61	NR	b	NA
cis-1,2-Dichloroethene	(µg/L)		4	4	140		1	J	60.5	70		2
Tetrachloroethene	(µg/L)		4	4	1400		10		548.25	5		4
trans-1,2-Dichloroethene	(µg/L)		4	2	2	J	2	J	2	100		0
Trichloroethene	(µg/L)		4	4	85		2	J	37.75	5		2

Table 4.74. REGIME=East Fork Poplar Creek—AREA NAME=Groundwater Monitoring Plan Grid Location D2

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	9.75	8.77	9.26	250		0
Sulfate	(mg/L)		2	2	12.2	11.8	12	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.255	0.255	0.255	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	69.6	66.8	68.2	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	1	0.0841	0.0841	0.0841	0.3		0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.0142	0.0136	0.0139	NR		NA
Magnesium, ICAP	(mg/L)		2	2	14.4	14.1	14.25	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.0155	0.0143	0.0149	0.05		0
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	1	2.04	2.04	2.04	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	14.3	14.1	14.2	NR		NA
Sodium, ICAP	(mg/L)		2	2	7.49	7.44	7.465	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.431	0.421	0.426	NR		NA
Sulfur, ICAP	(mg/L)		2	2	4.46	4	4.23	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA

Table 4.74 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Static Water Level	(ft - toc)		4	NA	23.85		-23.85		0	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	218		203		210.5	NR		NA
Conductivity	(umho/cm)		2	2	478		453		465.5	NR		NA
Dissolved Solids	(mg/L)		2	2	305		272		288.5	500		0
pH	(pH)		2	2	7.25		7.06		7.155	6.5/8.5		0
Turbidity	(NTU)		2	2	0.489		0.135		0.312	1		0
1,2-Dichloroethene (Total)	(µg/L)		2	1	1	J	1	J	1	NR	b	NA
cis-1,2-Dichloroethene	(µg/L)		2	1	1	J	1	J	1	70		0
Tetrachloroethene	(µg/L)		2	2	500		400		450	5		2
Trichloroethene	(µg/L)		2	1	4	J	4	J	4	5		0

Table 4.75. REGIME=East Fork Poplar Creek—AREA NAME=Groundwater Monitoring Plan Grid Location E1

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Antimony, ICAP	(mg/L)		1	1	0.2		0.2		0.2	0.006		1
Arsenic, ICAP	(mg/L)		1	1	0.2		0.2		0.2	0.05		1
Barium, ICAP	(mg/L)		1	1	0.153		0.153		0.153	2		0
Cadmium, ICAP	(mg/L)		1	1	0.01		0.01		0.01	0.005		1
Calcium, ICAP	(mg/L)		1	1	116		116		116	NR		NA
Chromium, ICAP	(mg/L)		1	1	0.02		0.02		0.02	0.1		0
Iron Related Bacteria	(cfu/ml)		1	1	100	J	100	J	100	NR		NA
Lead, ICAP	(mg/L)		1	1	0.1		0.1		0.1	0.015	c	1
Lithium, ICAP	(mg/L)		1	1	0.0169		0.0169		0.0169	NR		NA
Magnesium, ICAP	(mg/L)		1	1	12.7		12.7		12.7	NR		NA
Manganese, ICAP	(mg/L)		1	1	0.0209		0.0209		0.0209	0.05		0
Nickel, PMS	(mg/L)		1	1	0.0111		0.0111		0.0111	NR		NA
Nickel, ICAP	(mg/L)		1	1	0.05		0.05		0.05	0.1	d	0
Niobium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	NR		NA
Phosphorus, ICAP	(mg/L)		1	1	0.5		0.5		0.5	NR		NA
Selenium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	0.05		1
Silicon, ICAP	(mg/L)		1	1	8.01		8.01		8.01	NR		NA
Slime Forming Bacteria	(cfu/ml)		1	1	100	J	100	J	100	NR		NA
Sodium, ICAP	(mg/L)		1	1	10.8		10.8		10.8	NR		NA
Strontium, ICAP	(mg/L)		1	1	0.174		0.174		0.174	NR		NA
Sulfur, ICAP	(mg/L)		1	1	3.28		3.28		3.28	NR		NA
Thallium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		1	1	0.05		0.05		0.05	NR		NA
Uranium, ICAP	(mg/L)		1	1	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		2	NA	19.45		-19.45		0	NR		NA
Conductivity	(umho/cm)		1	1	622		622		622	NR		NA
pH	(pH)		1	1	6.92		6.92		6.92	6.5/8.5		0

Table 4.76. REGIME=East Fork Poplar Creek—AREA NAME=Groundwater Monitoring Plan Grid Location E3

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	11.4		11.1		11.25	250		0
Nitrate Nitrogen	(mg/L)		2	2	0.0474		0.0361		0.04175	10		0
Sulfate	(mg/L)		2	2	15.5		14.9		15.2	250		0
Antimony, ICAP	(mg/L)		3	3	0.2		0.2		0.2	0.006		3
Arsenic, ICAP	(mg/L)		3	3	0.2		0.2		0.2	0.05		3
Barium, ICAP	(mg/L)		3	3	0.493		0.114		0.359333	2		0
Boron, ICAP	(mg/L)		3	2	0.137		0.136		0.1365	NR		NA
Cadmium, ICAP	(mg/L)		3	3	0.01		0.01		0.01	0.005		3
Calcium, ICAP	(mg/L)		3	3	85.6		74.7		78.43333	NR		NA
Chromium, PMS	(mg/L)		3	1	0.19		0.19		0.19	NR		NA
Chromium, ICAP	(mg/L)		3	3	0.217		0.02		0.085667	0.1		1
Iron, ICAP	(mg/L)		3	1	1.44		1.44		1.44	0.3		1
Iron Related Bacteria	(cfu/ml)		1	1	100	J	100	J	100	NR		NA
Lead, ICAP	(mg/L)		3	3	0.1		0.1		0.1	0.015	c	3
Lithium, ICAP	(mg/L)		3	2	0.0223		0.02		0.02115	NR		NA
Magnesium, ICAP	(mg/L)		3	3	17.2		5.09		12.93	NR		NA
Manganese, ICAP	(mg/L)		3	2	0.0519		0.0224		0.03715	0.05		1
Nickel, PMS	(mg/L)		3	1	0.402		0.402		0.402	NR		NA
Nickel, ICAP	(mg/L)		3	3	0.424		0.05		0.174667	0.1	d	1
Niobium, ICAP	(mg/L)		3	3	0.2		0.2		0.2	NR		NA
Phosphorus, ICAP	(mg/L)		3	3	0.5		0.5		0.5	NR		NA
Potassium, ICAP	(mg/L)		3	2	5.77		5.7		5.735	NR		NA
Selenium, ICAP	(mg/L)		3	3	0.2		0.2		0.2	0.05		3
Silicon, ICAP	(mg/L)		3	3	9.36		4.43		7.666667	NR		NA
Slime Forming Bacteria	(cfu/ml)		1	1	50000		50000		50000	NR		NA
Sodium, ICAP	(mg/L)		3	3	25.3		8.71		14.29667	NR		NA
Strontium, ICAP	(mg/L)		3	3	1.3		0.172		0.914	NR		NA
Sulfate Reducing Bacteria	(cfu/ml)		1	1	100		100		100	NR		NA
Sulfur, ICAP	(mg/L)		3	3	8.2		5.18		6.266667	NR		NA
Thallium, ICAP	(mg/L)		3	3	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		3	3	0.05		0.05		0.05	NR		NA

Table 4.76 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Uranium, PMS	(mg/L)		3	3	0.00104		0.000699		0.00085	0.03		0
Uranium, ICAP	(mg/L)		3	3	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		3	3	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		6	NA	10.53		-10.53		0	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	242		225		233.5	NR		NA
Conductivity	(umho/cm)		3	3	559		536		543.6667	NR		NA
Dissolved Solids	(mg/L)		2	2	328		294		311	500		0
pH	(pH)		3	3	7.1		6.69		6.94	6.5/8.5		0
Turbidity	(NTU)		2	2	0.377		0.303		0.34	1		0
Gross Alpha	(pCi/L)		2	2	20		17		18.5	15	e	2
Gross Beta	(pCi/L)		2	1	7.7		7.7		7.7	50	a	0
1,1,1-Trichloroethane	(µg/L)		2	2	10		9		9.5	200		0
1,1-Dichloroethane	(µg/L)		2	2	170		150		160	NR		NA
1,1-Dichloroethene	(µg/L)		2	2	59		56		57.5	7		2
1,2-Dichloroethene (Total)	(µg/L)		2	2	18		14		16	NR	b	NA
Chloroethane	(µg/L)		2	2	45		19		32	NR		NA
cis-1,2-Dichloroethene	(µg/L)		2	2	17		13		15	70		0
Tetrachloroethene	(µg/L)		2	2	160		130		145	5		2
trans-1,2-Dichloroethene	(µg/L)		2	2	1	J	1	J	1	100		0
Trichloroethene	(µg/L)		2	2	49		40		44.5	5		2
Vinyl chloride	(µg/L)		2	1	3		3		3	2		1

Table 4.77. REGIME=East Fork Poplar Creek—AREA NAME=Groundwater Monitoring Plan Grid Location G2

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Antimony, ICAP	(mg/L)		1	1	0.2		0.2		0.2	0.006		1
Arsenic, ICAP	(mg/L)		1	1	0.2		0.2		0.2	0.05		1
Barium, ICAP	(mg/L)		1	1	0.334		0.334		0.334	2		0
Cadmium, ICAP	(mg/L)		1	1	0.01		0.01		0.01	0.005		1
Calcium, ICAP	(mg/L)		1	1	171		171		171	NR		NA
Chromium, PMS	(mg/L)		1	1	0.0614		0.0614		0.0614	NR		NA
Chromium, ICAP	(mg/L)		1	1	0.0569		0.0569		0.0569	0.1		0
Iron, ICAP	(mg/L)		1	1	0.484		0.484		0.484	0.3		1
Iron Related Bacteria	(cfu/ml)		1	1	100	J	100	J	100	NR		NA
Lead, ICAP	(mg/L)		1	1	0.1		0.1		0.1	0.015	c	1
Lithium, ICAP	(mg/L)		1	1	0.0197		0.0197		0.0197	NR		NA
Magnesium, ICAP	(mg/L)		1	1	18.7		18.7		18.7	NR		NA
Manganese, ICAP	(mg/L)		1	1	0.0886		0.0886		0.0886	0.05		1
Nickel, PMS	(mg/L)		1	1	0.248		0.248		0.248	NR		NA
Nickel, ICAP	(mg/L)		1	1	0.216		0.216		0.216	0.1	d	1
Niobium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	NR		NA
Phosphorus, ICAP	(mg/L)		1	1	0.5		0.5		0.5	NR		NA
Selenium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	0.05		1
Silicon, ICAP	(mg/L)		1	1	10.1		10.1		10.1	NR		NA
Slime Forming Bacteria	(cfu/ml)		1	1	100	J	100	J	100	NR		NA
Sodium, ICAP	(mg/L)		1	1	27.1		27.1		27.1	NR		NA
Strontium, ICAP	(mg/L)		1	1	0.321		0.321		0.321	NR		NA
Sulfate Reducing Bacteria	(cfu/ml)		1	1	100		100		100	NR		NA
Sulfur, ICAP	(mg/L)		1	1	9.66		9.66		9.66	NR		NA
Thallium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		1	1	0.05		0.05		0.05	NR		NA
Uranium, ICAP	(mg/L)		1	1	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		1	1	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		2	NA	11.19		-11.19		0	NR		NA
Conductivity	(umho/cm)		1	1	1056		1056		1056	NR		NA
pH	(pH)		1	1	7.32		7.32		7.32	6.5/8.5		0

Table 4.78. REGIME=East Fork Poplar Creek—AREA NAME=Groundwater Monitoring Plan Grid Location G3

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		4	4	16.8	2.93	9.97	250		0
Fluoride	(mg/L)		4	2	0.243	0.229	0.236	4		0
Nitrate Nitrogen	(mg/L)		4	4	0.908	0.206	0.54325	10		0
Sulfate	(mg/L)		4	4	21.4	19.1	20.425	250		0
Antimony, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.006		4
Arsenic, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05		4
Barium, ICAP	(mg/L)		4	4	0.395	0.0535	0.22225	2		0
Cadmium, ICAP	(mg/L)		4	4	0.01	0.01	0.01	0.005		4
Calcium, ICAP	(mg/L)		4	4	83.1	52.5	69.05	NR		NA
Chromium, PMS	(mg/L)		4	1	0.0244	0.0244	0.0244	NR		NA
Chromium, ICAP	(mg/L)		4	4	0.023	0.02	0.02075	0.1		0
Iron, ICAP	(mg/L)		4	1	0.221	0.221	0.221	0.3		0
Iron Related Bacteria	(cfu/ml)		1	1	5000	5000	5000	NR		NA
Lead, ICAP	(mg/L)		4	4	0.1	0.1	0.1	0.015	c	4
Lithium, ICAP	(mg/L)		4	2	0.0168	0.0129	0.01485	NR		NA
Magnesium, ICAP	(mg/L)		4	4	10.1	4.16	7.245	NR		NA
Manganese, ICAP	(mg/L)		4	3	0.00887	0.0069	0.00774	0.05		0
Nickel, PMS	(mg/L)		4	2	0.03	0.0164	0.0232	NR		NA
Nickel, ICAP	(mg/L)		4	4	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		4	4	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		4	3	2.95	2.33	2.623333	NR		NA
Selenium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05		4
Silicon, ICAP	(mg/L)		4	4	8.01	3.02	5.5475	NR		NA
Slime Forming Bacteria	(cfu/ml)		1	1	1000	1000	1000	NR		NA
Sodium, ICAP	(mg/L)		4	4	7.08	6.72	6.925	NR		NA
Strontium, ICAP	(mg/L)		4	4	0.4	0.0715	0.23355	NR		NA
Sulfate Reducing Bacteria	(cfu/ml)		1	1	100	100	100	NR		NA
Sulfur, ICAP	(mg/L)		4	4	7.31	6.61	6.945	NR		NA
Thallium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		4	4	0.05	0.05	0.05	NR		NA

Table 4.78 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Uranium, PMS	(mg/L)		4	2	0.00152		0.000607		0.001064	0.03		0
Uranium, ICAP	(mg/L)		4	4	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		4	4	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		8	NA	14.12		-14.12		0	NR		NA
Alkalinity as HCO3	(mg/L)		4	4	226		135		184.25	NR		NA
Conductivity	(umho/cm)		4	4	544		281		432.75	NR		NA
Dissolved Solids	(mg/L)		4	4	328		182		260.25	500		0
pH	(pH)		4	4	7.22		6.63		6.9125	6.5/8.5		0
Turbidity	(NTU)		4	4	2.14		0.177		0.82225	1		1
1,1-Dichloroethene	(µg/L)		4	2	2	J	2	J	2	7		0
1,2-Dichloroethene (Total)	(µg/L)		4	2	3	J	2	J	2.5	NR	b	NA
Carbon tetrachloride	(µg/L)		4	4	100		12		46.5	5		4
Chloroform	(µg/L)		4	4	4	J	2	J	3	100	g	0
cis-1,2-Dichloroethene	(µg/L)		4	2	3	J	2	J	2.5	70		0
Tetrachloroethene	(µg/L)		4	2	16		11		13.5	5		2
Trichloroethene	(µg/L)		4	2	3	J	2	J	2.5	5		0

Table 4.79. REGIME=East Fork Poplar Creek—AREA NAME=Groundwater Monitoring Plan Grid Location H3

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Antimony, ICAP	(mg/L)		1	1	0.2	0.2	0.2	0.006		1
Arsenic, ICAP	(mg/L)		1	1	0.2	0.2	0.2	0.05		1
Barium, ICAP	(mg/L)		1	1	0.201	0.201	0.201	2		0
Cadmium, ICAP	(mg/L)		1	1	0.01	0.01	0.01	0.005		1
Calcium, ICAP	(mg/L)		1	1	98.3	98.3	98.3	NR		NA
Chromium, ICAP	(mg/L)		1	1	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		1	1	0.0568	0.0568	0.0568	0.3		0
Iron Related Bacteria	(cfu/ml)		1	1	5000	5000	5000	NR		NA
Lead, ICAP	(mg/L)		1	1	0.1	0.1	0.1	0.015	c	1
Lithium, ICAP	(mg/L)		1	1	0.0117	0.0117	0.0117	NR		NA
Magnesium, ICAP	(mg/L)		1	1	7.87	7.87	7.87	NR		NA
Nickel, ICAP	(mg/L)		1	1	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		1	1	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		1	1	2.65	2.65	2.65	NR		NA
Selenium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	0.05		1
Silicon, ICAP	(mg/L)		1	1	6.88	6.88	6.88	NR		NA
Slime Forming Bacteria	(cfu/ml)		1	1	1000	1000	1000	NR		NA
Sodium, ICAP	(mg/L)		1	1	5.45	5.45	5.45	NR		NA
Strontium, ICAP	(mg/L)		1	1	0.249	0.249	0.249	NR		NA
Sulfate Reducing Bacteria	(cfu/ml)		1	1	1000	1000	1000	NR		NA
Sulfur, ICAP	(mg/L)		1	1	11	11	11	NR		NA
Thallium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		1	1	0.05	0.05	0.05	NR		NA
Uranium, ICAP	(mg/L)		1	1	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		1	1	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		2	NA	13.94	-13.94	0	NR		NA
Conductivity	(umho/cm)		1	1	553	553	553	NR		NA
pH	(pH)		1	1	7.23	7.23	7.23	6.5/8.5		0

Table 4.80. REGIME=East Fork Poplar Creek—AREA NAME=Groundwater Monitoring Plan Grid Location J3

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		2	2	264		263		263.5	NR		NA
Chloride	(mg/L)		2	2	37.7		36.2		36.95	250		0
Sulfate	(mg/L)		2	2	16		15		15.5	250		0
Static Water Level	(ft - toc)		2	NA	13.7		13.25		13.475	NR		NA
Dissolved Solids	(mg/L)		2	2	391		354		372.5	500		0
Gross Alpha	(pCi/L)		2	1	1.82		1.82		1.82	15	e	0
Gross Beta	(pCi/L)		2	1	4.91		4.91		4.91	50	a	0
1,1,1-Trichloroethane	(µg/L)		2	2	5		4	J	4.5	200		0
1,1-Dichloroethane	(µg/L)		2	2	18		13		15.5	NR		NA
1,1-Dichloroethene	(µg/L)		2	2	69		51		60	7		2
cis-1,2-Dichloroethene	(µg/L)		2	2	66		55		60.5	70		0
Methane	(µg/L)		2	2	21		18		19.5	NR		NA
Tetrachloroethene	(µg/L)		2	2	3100		2400		2750	5		2
trans-1,2-Dichloroethene	(µg/L)		2	2	4	J	3	J	3.5	100		0
Trichloroethene	(µg/L)		2	2	130		130		130	5		2
Vinyl chloride	(µg/L)		2	2	7		5		6	2		2

Table 4.81. REGIME=East Fork Poplar Creek—AREA NAME=Groundwater Monitoring Plan Grid Location K1

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	12.6	11.8	12.2	250		0
Sulfate	(mg/L)		2	2	12.1	11	11.55	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.263	0.255	0.259	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	50.7	49.7	50.2	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.0281	0.0276	0.02785	NR		NA
Magnesium, ICAP	(mg/L)		2	2	11.6	11.6	11.6	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.0598	0.0465	0.05315	0.05		1
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	3.62	3.48	3.55	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	11	10.9	10.95	NR		NA
Sodium, ICAP	(mg/L)		2	2	35.3	34.7	35	NR		NA
Strontium, ICAP	(mg/L)		2	2	1.37	1.32	1.345	NR		NA
Sulfur, ICAP	(mg/L)		2	2	4.46	4.25	4.355	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		4	NA	6.92	-6.92	0	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	227	226	226.5	NR		NA
Conductivity	(umho/cm)		2	2	501	475	488	NR		NA
Dissolved Solids	(mg/L)		2	2	287	285	286	500		0
pH	(pH)		2	2	7.83	7.65	7.74	6.5/8.5		0
Total Suspended Solids	(mg/L)		2	1	2	2	2	NR		NA
Turbidity	(NTU)		2	2	0.666	0.388	0.527	1		0

Table 4.82. REGIME=East Fork Poplar Creek—AREA NAME=Groundwater Monitoring Plan Grid Location K2

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	1.81	1.75	1.78	250		0
Fluoride	(mg/L)		2	2	0.171	0.157	0.164	4		0
Sulfate	(mg/L)		2	2	15.6	15.5	15.55	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.158	0.158	0.158	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	48.7	46.3	47.5	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.0156	0.0154	0.0155	NR		NA
Magnesium, ICAP	(mg/L)		2	2	10.8	10.8	10.8	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.0138	0.0129	0.01335	0.05		0
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	1	2.14	2.14	2.14	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	8.66	8.57	8.615	NR		NA
Sodium, ICAP	(mg/L)		2	2	27.9	27.6	27.75	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.624	0.606	0.615	NR		NA
Sulfur, ICAP	(mg/L)		2	2	5.36	5.36	5.36	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		4	NA	6.18	-6.18	0	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	210	206	208	NR		NA
Dissolved Solids	(mg/L)		2	2	250	236	243	500		0
pH	(pH)		2	2	7.85	7.35	7.6	6.5/8.5		0
Turbidity	(NTU)		2	2	0.616	0.106	0.361	1		0

Table 4.83. REGIME=East Fork Poplar Creek—AREA NAME=Grid J Primary

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	81.2	70.2	75.7	250		0
Fluoride	(mg/L)		2	2	0.267	0.231	0.249	4		0
Sulfate	(mg/L)		2	2	1.46	0.28	0.87	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.0608	0.0532	0.057	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	114	110	112	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	2	26.1	24.2	25.15	0.3		2
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	15.4	14.8	15.1	NR		NA
Manganese, ICAP	(mg/L)		2	2	0.786	0.755	0.7705	0.05		2
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	3.77	2.14	2.955	NR		NA
Sodium, ICAP	(mg/L)		2	2	18.9	18.2	18.55	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.256	0.229	0.2425	NR		NA
Sulfur, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		4	NA	9.72	-9.72	0	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	292	268	280	NR		NA
Conductivity	(umho/cm)		2	2	900	878	889	NR		NA
Dissolved Solids	(mg/L)		2	2	430	389	409.5	500		0

Table 4.83 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
pH	(pH)		2	2	6.85		6.67		6.76	6.5/8.5		0
Total Suspended Solids	(mg/L)		2	2	40		38		39	NR		NA
Turbidity	(NTU)		2	2	272		196		234	1		2
1,1-Dichloroethane	(µg/L)		2	1	2	J	2	J	2	NR		NA
1,1-Dichloroethene	(µg/L)		2	1	6		6		6	7		0
1,2-Dichloroethene (Total)	(µg/L)		2	2	140		7		73.5	NR	b	NA
Acetone	(µg/L)		2	1	14		14		14	NR		NA
cis-1,2-Dichloroethene	(µg/L)		2	2	140		7		73.5	70		1
Tetrachloroethene	(µg/L)		2	2	30		1	J	15.5	5		1
trans-1,2-Dichloroethene	(µg/L)		2	1	2	J	2	J	2	100		0
Trichloroethene	(µg/L)		2	1	8		8		8	5		1
Vinyl chloride	(µg/L)		2	1	9		9		9	2		1

Table 4.84. REGIME=East Fork Poplar Creek—AREA NAME=New Hope Pond

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		10	10	290		136		223.2	NR		NA
Chloride	(mg/L)		20	20	78.2		9.7		32.615	250		0
Fluoride	(mg/L)		20	13	0.31		0.1		0.174308	4		0
Nitrate Nitrogen	(mg/L)		10	6	1.33		0.052		0.641883	10		0
Nitrate/Nitrite	(mg/L)		10	8	1.5		0.19		0.97125	NR		NA
Sulfate	(mg/L)		20	20	39.9		0.26		17.8265	250		0
Aluminum, ICAP	(mg/L)		11	3	0.395		0.244		0.296333	0.2		3
Antimony, ICAP	(mg/L)		11	11	0.2		0.2		0.2	0.006		11
Arsenic, ICAP	(mg/L)		11	11	0.2		0.2		0.2	0.05		11
Barium, ICAP	(mg/L)		11	11	0.627		0.0306		0.229036	2		0
Cadmium, ICAP	(mg/L)		11	11	0.01		0.01		0.01	0.005		11
Calcium, ICAP	(mg/L)		11	11	102		43.4		74.35455	NR		NA
Chromium, PMS	(mg/L)		11	2	0.0446		0.0117		0.02815	NR		NA
Chromium, ICAP	(mg/L)		11	11	0.0498		0.02		0.022709	0.1		0
Iron, ICAP	(mg/L)		11	10	13		0.137		3.0599	0.3		6
Iron Related Bacteria	(cfu/ml)		1	1	100	J	100	J	100	NR		NA
Lead, PMS	(mg/L)		11	2	0.00814		0.00117		0.004655	0.015	c	0
Lead, ICAP	(mg/L)		11	11	0.1		0.1		0.1	0.015	c	11
Lithium, ICAP	(mg/L)		11	2	0.0152		0.0149		0.01505	NR		NA
Magnesium, ICAP	(mg/L)		11	11	26.7		11.4		18.74545	NR		NA
Manganese, ICAP	(mg/L)		11	10	0.815		0.00746		0.28686	0.05		6
Nickel, PMS	(mg/L)		11	1	0.217		0.217		0.217	NR		NA
Nickel, ICAP	(mg/L)		11	11	0.244		0.05		0.067636	0.1	d	1
Niobium, ICAP	(mg/L)		11	11	0.2		0.2		0.2	NR		NA
Phosphorus, ICAP	(mg/L)		11	11	0.5		0.5		0.5	NR		NA
Potassium, ICAP	(mg/L)		11	9	3.9		2.03		2.755556	NR		NA
Selenium, PMS	(mg/L)		11	1	0.0129		0.0129		0.0129	0.05		0
Selenium, ICAP	(mg/L)		11	11	0.2		0.2		0.2	0.05		11
Silicon, ICAP	(mg/L)		11	11	8.01		3.03		5.376364	NR		NA
Slime Forming Bacteria	(cfu/ml)		1	1	1000		1000		1000	NR		NA
Sodium, ICAP	(mg/L)		11	11	23.5		5.06		13.68636	NR		NA
Strontium, ICAP	(mg/L)		11	11	0.451		0.0499		0.270718	NR		NA

Table 4.84 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Sulfur, ICAP	(mg/L)		11	11	14		0.5		5.048182	NR		NA
Thallium, ICAP	(mg/L)		11	11	0.2		0.2		0.2	NR		NA
Titanium, ICAP	(mg/L)		11	11	0.05		0.05		0.05	NR		NA
Uranium, PMS	(mg/L)		11	5	0.0777		0.00143		0.02971	0.03		2
Uranium, ICAP	(mg/L)		11	11	2		2		2	NR		NA
Zirconium, ICAP	(mg/L)		11	11	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		34	NA	20.61		-20.61		3.705	NR		NA
Alkalinity as HCO3	(mg/L)		10	10	368		172		244.8	NR		NA
Conductivity	(umho/cm)		11	11	774		417		598.8182	NR		NA
Dissolved Solids	(mg/L)		22	22	491		230		336.8182	500		0
pH	(pH)		11	11	7.61		6.77		7.228182	6.5/8.5		0
Total Suspended Solids	(mg/L)		22	11	44.5		2		10.72727	NR		NA
Turbidity	(NTU)		10	10	202		1.22		41.154	1		10
Uranium-233/234	(pCi/L)		8	8	568.5		0.6		115.51	NR		NA
Uranium-234	(pCi/L)		2	2	8.2		7.6		7.9	20		0
Uranium-235	(pCi/L)		10	5	32.2		0.47		10.112	24		1
Uranium-236	(pCi/L)		9	3	17.29		0.11		9.09	NR		NA
Uranium-238	(pCi/L)		10	8	202.5		1.68		52.8575	24		2
Gross Alpha	(pCi/L)		22	14	698.14		2.07		103.2671	15	e	6
Gross Beta	(pCi/L)		22	12	288.53		3.68		41.82333	50	a	2
1,1-Dichloroethene	(µg/L)		22	5	4	J	1	J	2.2	7		0
1,2-Dichloroethene (Total)	(µg/L)		10	8	190		2	J	53.75	NR	b	NA
Carbon disulfide	(µg/L)		22	2	5		3	J	4	NR		NA
Carbon tetrachloride	(µg/L)		22	12	1600		7		585.6667	5		12
Chloroform	(µg/L)		22	13	780		3	J	120.0769	100	g	3
cis-1,2-Dichloroethene	(µg/L)		22	14	190		2	J	46.07143	70		2
Methane	(µg/L)		12	8	1100		9		255.875	NR		NA
Methylene chloride	(µg/L)		22	2	29		4	J	16.5	5		1
Tetrachloroethene	(µg/L)		22	18	740		2	J	177.8333	5		12
trans-1,2-Dichloroethene	(µg/L)		22	2	2	J	1	J	1.5	100		0
Trichloroethene	(µg/L)		22	12	180		1	J	68.66667	5		8
Trichlorofluoromethane	(µg/L)		10	1	1	J	1	J	1	NR		NA
Vinyl chloride	(µg/L)		22	5	3		1	J	2	2		1

Table 4.85. REGIME=East Fork Poplar Creek—AREA NAME=Rust Garage Area

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	52.6	48.5	50.55	250		0
Nitrate Nitrogen	(mg/L)		2	1	1280	1280	1280	10		1
Sulfate	(mg/L)		2	2	1.56	1.16	1.36	250		0
Antimony, ICAP	(mg/L)		2	2	0.4	0.4	0.4	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.4	0.4	0.4	0.05		2
Barium, ICAP	(mg/L)		2	2	7.3	7.04	7.17	2		2
Cadmium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.005		2
Calcium, ICAP	(mg/L)		2	2	1600	1540	1570	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.04	0.04	0.04	0.1		0
Lead, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.015	c	2
Lithium, ICAP	(mg/L)		2	2	0.156	0.153	0.1545	NR		NA
Magnesium, ICAP	(mg/L)		2	2	160	151	155.5	NR		NA
Manganese, ICAP	(mg/L)		2	2	5.42	3.28	4.35	0.05		2
Nickel, PMS	(mg/L)		2	2	0.253	0.24	0.2465	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.236	0.233	0.2345	0.1	d	2
Niobium, ICAP	(mg/L)		2	2	0.4	0.4	0.4	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	1	1	1	NR		NA
Potassium, ICAP	(mg/L)		2	2	10.1	7.91	9.005	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.4	0.4	0.4	0.05		2
Silicon, ICAP	(mg/L)		2	2	25.1	24.2	24.65	NR		NA
Sodium, ICAP	(mg/L)		2	2	95.9	83.5	89.7	NR		NA
Strontium, ICAP	(mg/L)		2	2	3.89	3.82	3.855	NR		NA
Sulfur, ICAP	(mg/L)		2	2	1	1	1	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.4	0.4	0.4	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.1	0.1	0.1	NR		NA
Uranium, PMS	(mg/L)		2	2	0.00147	0.000928	0.001199	0.03		0
Uranium, ICAP	(mg/L)		2	2	4	4	4	NR		NA
m,p-Xylene, X-10 lab	(µg/L)		2	2	33	7	20	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.4	0.4	0.4	NR		NA

Table 4.85 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Static Water Level	(ft - toc)		4	NA	2.58		-2.58		0	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	306		259		282.5	NR		NA
Conductivity	(umho/cm)		2	2	9060		8800		8930	NR		NA
Dissolved Solids	(mg/L)		2	2	7350		7010		7180	500		2
pH	(pH)		2	2	5.53		5.3		5.415	6.5/8.5		2
Turbidity	(NTU)		2	2	0.62		0.556		0.588	1		0
Gross Beta	(pCi/L)		2	2	2600		2400		2500	50	a	2
1,1-Dichloroethene	(µg/L)		2	2	3	J	2	J	2.5	7		0
1,2-Dichloroethene (Total)	(µg/L)		2	2	14		14		14	NR	b	NA
1,2-Dimethylbenzene	(µg/L)		2	2	110		41		75.5	NR		NA
Benzene	(µg/L)		2	2	1300		870		1085	5		2
Bromoform	(µg/L)		2	2	3	J	3	J	3	100	g	0
Chloroform	(µg/L)		2	2	18		13		15.5	100	g	0
cis-1,2-Dichloroethene	(µg/L)		2	2	14		14		14	70		0
Ethylbenzene	(µg/L)		2	1	1	J	1	J	1	700		0
Methylene chloride	(µg/L)		2	2	28		17		22.5	5		2
Naphthalene	(µg/L)		2	2	18		15		16.5	NR		NA
Tetrachloroethene	(µg/L)		2	2	240		200	J	220	5		2
Toluene	(µg/L)		2	1	3	J	3	J	3	1000		0
Trichloroethene	(µg/L)		2	2	8		4	J	6	5		1
Xylenes	(µg/L)		2	2	140		48		94	10000		0

Table 4.86. REGIME=East Fork Poplar Creek—AREA NAME=S-2 Site

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	7.66	6.21	6.935	250		0
Fluoride	(mg/L)		2	2	1.45	0.873	1.1615	4		0
Nitrate Nitrogen	(mg/L)		2	2	61.9	51.5	56.7	10		2
Sulfate	(mg/L)		2	2	18.8	16.4	17.6	250		0
Aluminum, ICAP	(mg/L)		2	1	0.365	0.365	0.365	0.2		1
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.111	0.0874	0.0992	2		0
Cadmium, PMS	(mg/L)		2	2	0.103	0.0818	0.0924	0.005		2
Cadmium, ICAP	(mg/L)		2	2	0.116	0.0763	0.09615	0.005		2
Calcium, ICAP	(mg/L)		2	2	111	111	111	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Copper, ICAP	(mg/L)		2	2	0.23	0.154	0.192	1.3		0
Iron, ICAP	(mg/L)		2	2	0.232	0.094	0.163	0.3		0
Lead, PMS	(mg/L)		2	1	0.00102	0.00102	0.00102	0.015	c	0
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	18.7	14.2	16.45	NR		NA
Manganese, ICAP	(mg/L)		2	2	3.91	2.31	3.11	0.05		2
Nickel, PMS	(mg/L)		2	2	0.0294	0.0151	0.02225	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	3.4	3.21	3.305	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	3.17	2.78	2.975	NR		NA
Sodium, ICAP	(mg/L)		2	2	14.5	13.3	13.9	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.25	0.173	0.2115	NR		NA
Sulfur, ICAP	(mg/L)		2	2	6.16	5.76	5.96	NR		NA
Thallium, PMS	(mg/L)		2	2	0.00222	0.00176	0.00199	0.002		1
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA

Table 4.86 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Uranium, PMS	(mg/L)		2	2	0.00583		0.00333		0.00458	0.03		0
Uranium, ICAP	(mg/L)		2	2	2		2		2	NR		NA
Zinc, ICAP	(mg/L)		2	1	0.0512		0.0512		0.0512	5		0
Zirconium, ICAP	(mg/L)		2	2	0.2		0.2		0.2	NR		NA
Static Water Level	(ft - toc)		4	NA	17.39		-17.39		0	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	191		169		180	NR		NA
Conductivity	(umho/cm)		2	2	939		927		933	NR		NA
Dissolved Solids	(mg/L)		2	2	665		643		654	500		2
pH	(pH)		2	2	6.58		6.2		6.39	6.5/8.5		1
Turbidity	(NTU)		2	2	3.64		1.61		2.625	1		2
Gross Alpha	(pCi/L)		2	1	8		8		8	15	e	0
1,2-Dichloroethene (Total)	(µg/L)		2	2	9		4	J	6.5	NR	b	NA
Carbon tetrachloride	(µg/L)		2	1	4	J	4	J	4	5		0
Chloroform	(µg/L)		2	2	11		9		10	100	g	0
cis-1,2-Dichloroethene	(µg/L)		2	2	9		4	J	6.5	70		0
Tetrachloroethene	(µg/L)		2	2	280		140		210	5		2
Trichloroethene	(µg/L)		2	2	120		49		84.5	5		2

Table 4.87. REGIME=East Fork Poplar Creek—AREA NAME=S-3 Site

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		2	2	650		370		510	NR		NA
Chloride	(mg/L)		2	2	174		172		173	250		0
Nitrate/Nitrite	(mg/L)		2	2	9520		8940		9230	NR		NA
Sulfate	(mg/L)		2	1	6.1		6.1		6.1	250		0
Static Water Level	(ft - toc)		2	NA	7.75		6.65		7.2	NR		NA
Dissolved Solids	(mg/L)		1	1	71700		71700		71700	500		1
Total Suspended Solids	(mg/L)		1	1	18		18		18	NR		NA
Technetium-99	(pCi/L)		2	2	30004.76		27087.53		28546.15	4000		2
Gross Alpha	(pCi/L)		2	2	551.02		137.25		344.135	15	e	2
Gross Beta	(pCi/L)		2	2	12612.67		12100.94		12356.81	50	a	2
Acetone	(µg/L)		2	2	18		10		14	NR		NA
Benzene	(µg/L)		2	2	1	J	1	J	1	5		0
Bromoform	(µg/L)		2	2	5		3	J	4	100	g	0
Bromomethane	(µg/L)		2	2	24		8	J	16	NR		NA
Carbon disulfide	(µg/L)		2	1	1	J	1	J	1	NR		NA
Chloroform	(µg/L)		2	2	34		31		32.5	100	g	0
Chloromethane	(µg/L)		2	1	21		21		21	NR		NA
Methylene chloride	(µg/L)		2	1	51		51		51	5		1
Tetrachloroethene	(µg/L)		2	2	3	J	3	J	3	5		0
Trichloroethene	(µg/L)		2	2	4	J	3	J	3.5	5		0

Table 4.88. REGIME=East Fork Poplar Creek—AREA NAME=Tank 2331-U, near Building 9201-1

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		1	1	306		306		306	NR		NA
Chloride	(mg/L)		1	1	3.8		3.8		3.8	250		0
Fluoride	(mg/L)		1	1	0.27		0.27		0.27	4		0
Nitrate/Nitrite	(mg/L)		1	1	0.065		0.065		0.065	NR		NA
Sulfate	(mg/L)		1	1	64.1		64.1		64.1	250		0
Dissolved Solids	(mg/L)		1	1	389		389		389	500		0
Total Suspended Solids	(mg/L)		1	1	5.5		5.5		5.5	NR		NA
Gross Alpha	(pCi/L)		2	1	4.81		4.81		4.81	15	e	0
Gross Beta	(pCi/L)		2	2	5.88		5.34		5.61	50	a	0
Benzene	(µg/L)		2	1	9		9		9	5		1
Carbon disulfide	(µg/L)		2	1	3	J	3	J	3	NR		NA

Table 4.89. REGIME=East Fork Poplar Creek—AREA NAME=Underground Tank T0134-U

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		4	4	2.11	1.82	1.965	250		0
Fluoride	(mg/L)		4	4	0.635	0.489	0.562	4		0
Nitrate Nitrogen	(mg/L)		4	4	0.578	0.398	0.488	10		0
Sulfate	(mg/L)		4	4	31.4	30.3	30.85	250		0
Aluminum, ICAP	(mg/L)		4	2	0.541	0.541	0.541	0.2		2
Antimony, PMS	(mg/L)		4	2	0.00268	0.00268	0.00268	0.006		0
Antimony, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.006		4
Arsenic, PMS	(mg/L)		4	2	0.00517	0.00517	0.00517	0.05		0
Arsenic, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05		4
Barium, ICAP	(mg/L)		4	4	0.0804	0.0763	0.07835	2		0
Cadmium, ICAP	(mg/L)		4	4	0.01	0.01	0.01	0.005		4
Calcium, ICAP	(mg/L)		4	4	49.5	48	48.75	NR		NA
Chromium, ICAP	(mg/L)		4	4	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		4	4	0.359	0.137	0.248	0.3		2
Lead, PMS	(mg/L)		4	4	0.00179	0.000799	0.001295	0.015	c	0
Lead, ICAP	(mg/L)		4	4	0.1	0.1	0.1	0.015	c	4
Lithium, ICAP	(mg/L)		4	4	0.138	0.0879	0.11295	NR		NA
Magnesium, ICAP	(mg/L)		4	4	8.05	7.68	7.865	NR		NA
Manganese, ICAP	(mg/L)		4	4	0.107	0.0494	0.0782	0.05		2
Nickel, ICAP	(mg/L)		4	4	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		4	4	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		4	4	2.61	2.1	2.355	NR		NA
Selenium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	0.05		4
Silicon, ICAP	(mg/L)		4	4	3.99	3.38	3.685	NR		NA
Sodium, ICAP	(mg/L)		4	4	3.11	2.95	3.03	NR		NA
Strontium, ICAP	(mg/L)		4	4	0.122	0.111	0.1165	NR		NA
Sulfur, ICAP	(mg/L)		4	4	10.7	10.6	10.65	NR		NA
Thallium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		4	4	0.05	0.05	0.05	NR		NA

Table 4.89 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Uranium, PMS	(mg/L)		4	4	0.052	0.0434	0.0477	0.03		4
Uranium, ICAP	(mg/L)		4	4	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		4	4	0.2	0.2	0.2	NR		NA
Static Water Level	(ft - toc)		8	NA	9.03	-9.03	0	NR		NA
Alkalinity as HCO3	(mg/L)		4	4	123	111	117	NR		NA
Conductivity	(umho/cm)		4	4	336	300	318	NR		NA
Dissolved Solids	(mg/L)		4	4	213	194	203.5	500		0
pH	(pH)		4	4	7.4	7.28	7.34	6.5/8.5		0
Total Suspended Solids	(mg/L)		4	4	10	3	6.5	NR		NA
Turbidity	(NTU)		4	4	14.9	1.79	8.345	1		4
Gross Alpha	(pCi/L)		4	4	37	21	29	15	e	4
Gross Beta	(pCi/L)		4	4	16	9.5	12.75	50	a	0

Table 4.90. REGIME=East Fork Poplar Creek—AREA NAME=Union Valley - Exit Pathway

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.		Minimum Detected Mmt.		Average Detected Mmts.	Reference Value		# Mmts. > Ref
Bicarbonate	(mg/L)		12	7	274		112		204.7143	NR		NA
Carbonate	(mg/L)		12	7	235		16.4		125.5	NR		NA
Chloride	(mg/L)		12	12	18		1.2		7.516667	250		0
Fluoride	(mg/L)		12	7	2.3		0.1		1.012857	4		0
Nitrate/Nitrite	(mg/L)		12	8	0.82		0.16		0.47375	NR		NA
Sulfate	(mg/L)		12	11	5.3		0.31		3.449091	250		0
Static Water Level	(ft - toc)		18	NA	36.12		2.65		25.19556	NR		NA
Dissolved Solids	(mg/L)		18	18	649		116		332.2778	500		5
Total Suspended Solids	(mg/L)		18	6	175		7.9		42.28333	NR		NA
Gross Alpha	(pCi/L)		12	6	4.31		0.75		2.148333	15	e	0
Gross Beta	(pCi/L)		12	8	9.93		2.37		5.7875	50	a	0
Acetone	(µg/L)		18	3	3	J	2	J	2.333333	NR		NA
Benzene	(µg/L)		18	4	3	J	2	J	2.5	5		0
Carbon disulfide	(µg/L)		18	2	3	J	1	J	2	NR		NA
Carbon tetrachloride	(µg/L)		18	4	5	J	4	J	4.25	5		0
Chlorobenzene	(µg/L)		18	2	1	J	1	J	1	100		0
Chloroform	(µg/L)		18	4	3	J	3	J	3	100	g	0
Chloromethane	(µg/L)		18	1	3	J	3	J	3	NR		NA
cis-1,2-Dichloroethene	(µg/L)		18	2	6		5	J	5.5	70		0
Tetrachloroethene	(µg/L)		18	8	2	J	1	J	1.75	5		0
Trichloroethene	(µg/L)		18	4	2	J	2	J	2	5		0
Vinyl chloride	(µg/L)		18	1	2		2		2	2		0

Table 4.91. REGIME=East Fork Poplar Creek—AREA NAME=Uranium Oxide Vault

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		2	2	22.2	9.01	15.605	250		0
Sulfate	(mg/L)		2	2	31.6	28	29.8	250		0
Antimony, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.006		2
Arsenic, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Barium, ICAP	(mg/L)		2	2	0.0804	0.0607	0.07055	2		0
Cadmium, ICAP	(mg/L)		2	2	0.01	0.01	0.01	0.005		2
Calcium, ICAP	(mg/L)		2	2	115	99.6	107.3	NR		NA
Chromium, ICAP	(mg/L)		2	2	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		2	2	0.442	0.073	0.2575	0.3		1
Iron Related Bacteria	(cfu/ml)		1	1	5000	5000	5000	NR		NA
Lead, ICAP	(mg/L)		2	2	0.1	0.1	0.1	0.015	c	2
Magnesium, ICAP	(mg/L)		2	2	12.3	10.3	11.3	NR		NA
Manganese, ICAP	(mg/L)		2	2	2.08	0.0303	1.05515	0.05		1
Nickel, PMS	(mg/L)		2	2	0.088	0.0229	0.05545	NR		NA
Nickel, ICAP	(mg/L)		2	2	0.0939	0.05	0.07195	0.1	d	0
Niobium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		2	2	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		2	2	4.02	2.78	3.4	NR		NA
Selenium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	0.05		2
Silicon, ICAP	(mg/L)		2	2	2.92	2.56	2.74	NR		NA
Slime Forming Bacteria	(cfu/ml)		1	1	1000	1000	1000	NR		NA
Sodium, ICAP	(mg/L)		2	2	19.5	16	17.75	NR		NA
Strontium, ICAP	(mg/L)		2	2	0.209	0.168	0.1885	NR		NA
Sulfate Reducing Bacteria	(cfu/ml)		1	1	1000	1000	1000	NR		NA
Sulfur, ICAP	(mg/L)		2	2	11.2	9.79	10.495	NR		NA
Thallium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		2	2	0.05	0.05	0.05	NR		NA
Uranium, PMS	(mg/L)		2	2	0.525	0.338	0.4315	0.03		2
Uranium, ICAP	(mg/L)		2	2	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		2	2	0.2	0.2	0.2	NR		NA

Table 4.91 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Static Water Level	(ft - toc)		4	NA	10.37	-10.37	0	NR		NA
Alkalinity as HCO3	(mg/L)		2	2	330	252	291	NR		NA
Conductivity	(umho/cm)		2	2	720	621	670.5	NR		NA
Dissolved Solids	(mg/L)		2	2	387	348	367.5	500		0
pH	(pH)		2	2	6.93	6.78	6.855	6.5/8.5		0
Turbidity	(NTU)		2	2	1.97	0.748	1.359	1		1
Gross Alpha	(pCi/L)		2	2	110	79	94.5	15	e	2
Gross Beta	(pCi/L)		2	2	97	82	89.5	50	a	2

Table 4.92. REGIME=East Fork Poplar Creek—AREA NAME=Y-12 Fuel Station

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value	# Mmts. > Ref
Static Water Level	(ft - toc)		3	NA	11.73	6	8.03	NR	NA
1,2-Dichloroethane	(µg/L)		3	1	690	690	690	5	1
1,2-Dichloropropane	(µg/L)		3	1	15	15	15	5	1
2-Butanone	(µg/L)		3	1	26	26	26	NR	NA
4-Methyl-2-pentanone	(µg/L)		3	1	150	150	150	NR	NA
Acetone	(µg/L)		3	1	51	51	51	NR	NA
Benzene	(µg/L)		3	1	7900	7900	7900	5	1
Ethylbenzene	(µg/L)		3	1	1100	1100	1100	700	1
Toluene	(µg/L)		3	1	4200	4200	4200	1000	1
Xylenes	(µg/L)		3	1	8300	8300	8300	10000	0

Table 4.93. REGIME=Pine Ridge—AREA NAME=Surface water sampling station locations

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Chloride	(mg/L)		10	10	1.13	0.72	0.903	250		0
Nitrate Nitrogen	(mg/L)		10	4	0.0791	0.0294	0.053675	10		0
Sulfate	(mg/L)		10	10	11	4.54	8.51	250		0
Aluminum, ICAP	(mg/L)		10	10	2.83	0.343	1.2094	0.2		10
Antimony, ICAP	(mg/L)		10	10	0.2	0.2	0.2	0.006		10
Arsenic, ICAP	(mg/L)		10	10	0.2	0.2	0.2	0.05		10
Barium, ICAP	(mg/L)		10	10	0.0437	0.0243	0.03543	2		0
Cadmium, ICAP	(mg/L)		10	10	0.01	0.01	0.01	0.005		10
Calcium, ICAP	(mg/L)		10	10	55.5	2.72	13.216	NR		NA
Chromium, ICAP	(mg/L)		10	10	0.02	0.02	0.02	0.1		0
Iron, ICAP	(mg/L)		10	10	1.69	0.216	0.8189	0.3		8
Lead, PMS	(mg/L)		10	7	0.0019	0.000506	0.000895	0.015	c	0
Lead, ICAP	(mg/L)		10	10	0.1	0.1	0.1	0.015	c	10
Magnesium, ICAP	(mg/L)		10	10	3.11	1.65	2.051	NR		NA
Manganese, ICAP	(mg/L)		10	10	0.0888	0.0128	0.04443	0.05		3
Nickel, ICAP	(mg/L)		10	10	0.05	0.05	0.05	0.1	d	0
Niobium, ICAP	(mg/L)		10	10	0.2	0.2	0.2	NR		NA
Phosphorus, ICAP	(mg/L)		10	10	0.5	0.5	0.5	NR		NA
Potassium, ICAP	(mg/L)		10	8	2.75	2.24	2.49	NR		NA
Selenium, ICAP	(mg/L)		10	10	0.2	0.2	0.2	0.05		10
Silicon, ICAP	(mg/L)		10	10	7.45	4.74	5.896	NR		NA
Sodium, ICAP	(mg/L)		10	10	1.44	0.565	0.9933	NR		NA
Strontium, ICAP	(mg/L)		10	10	0.0792	0.0135	0.0283	NR		NA
Sulfur, ICAP	(mg/L)		10	10	3.76	1.45	2.9	NR		NA
Thallium, ICAP	(mg/L)		10	10	0.2	0.2	0.2	NR		NA
Titanium, ICAP	(mg/L)		10	10	0.0668	0.05	0.05261	NR		NA
Uranium, ICAP	(mg/L)		10	10	2	2	2	NR		NA
Zirconium, ICAP	(mg/L)		10	10	0.2	0.2	0.2	NR		NA

Table 4.93 (continued)

Compound	Units	Filtered Status	# Samples	# Detected	Maximum Detected Mmt.	Minimum Detected Mmt.	Average Detected Mmts.	Reference Value		# Mmts. > Ref
Alkalinity as HCO3	(mg/L)		10	10	138	9.4	38.416	NR		NA
Conductivity	(umho/cm)		10	10	311	51	109.1	NR		NA
Dissolved Solids	(mg/L)		10	10	177	41	70.2	500		0
pH	(pH)		10	10	6.66	5.79	6.4	6.5/8.5		5
Total Suspended Solids	(mg/L)		10	9	53	6	19.77778	NR		NA
Turbidity	(NTU)		10	10	28	4.16	13.789	1		10
Gross Alpha	(pCi/L)		10	1	4.4	4.4	4.4	15	e	0

Footnote Definitions

[a] Regulatory guide for assessing compliance without further analysis.
[b] See *cis*-Dichloroethene and *trans*-Dichloroethene.
[c] Action level, which is applicable to community water systems and non-transient, non-community water systems.
[d] EPA has deleted the MCL for nickel from the *Code of Federal Regulations*. The state of Tennessee retains a nickel MCL of 0.1 mg/L in its currently effective drinking water regulations.
[e] Excludes radon and naturally occurring uranium.
[f] Applies to combined ^{226}Ra and ^{228}Ra.
[g] Limit for total trihalomethanes (bromodichloromethane + bromoform + chloroform + dibromochloromethane).

Qualifier Definitions

J – Indicates an estimated value (VOA)
J – Chemical tracer recovery is less than 50% or exceeds 125% (RAD)
Q – Inconsistent with historical measurements or other reported results
R – Rejected value